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Conference keynote addresses present the views of a non-professional on deaf education, a plea for a global approach to the child with auditory problems, a psychiatric approach to the problems of deaf children, and legislation affecting deaf education. Discussions and recommendations are summarized concerning the medical-psychological, management-education, and government-finance areas for four age groups: 0 to 5, 6 to 16, 17 to 21, and 22-plus years. An introduction and summary and impressions are provided; conference organization and participants are listed. (JD)

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Education of the DEAF The Challenge and the Charge

A Report of the National Conference on Education of the Deaf
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Education of the DEAF
The Challenge and the Charge

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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ACKNOWLEDGMENT

This conference acknowledges with gratitude the abundant contribution of the late Hon. John Fogarty to the improved opportunities for all deaf Americans. His vision, his enthusiasm, his skill and above all his sensitivity to the needs of handicapped persons constitute a rich legacy that shall encourage us to look forward with confidence to the difficult but challenging tasks that lie ahead.

This resolution is to be conveyed to his family.

Introduction

A campus wit recently observed that "the pathological urge to confer" is a chronic disease of modern academia. Certainly, an impressive number of conferences dealing with the deaf has been held -- so many that the National Advisory Committee on Education of the Deaf, at its first meeting in April of 1966, had reservations about the need for still another one. But the report that had first suggested the creation of NACED had also recommended that a national conference be held as soon as possible; and NACED's own deliberations pointed increasingly to the need for a constructive synthesis of the unprecedented activity of recent years, and the consequent accumulation of knowledge bearing on the education of deaf children. Accordingly, NACED organized the conference that is the subject of this report. On April 12, 1967, some 150 educators, medical and psychological specialists, audiologists, rehabilitation counselors and others with expert knowledge of the deaf met at Colorado Springs, Colo., for three days of intensive discussions. The results more than justified the "urge to confer".

NACED itself was created under Public Law 89-258, in October, 1965, to serve as a continuing advisory group to the Secretary of Health, Education, and Welfare. Its formation had been suggested in the report "Education of the Deaf" submitted the previous February to the then Secretary of Health, Education, and Welfare, Anthony J. Celebrezze. The report represented the work of a special advisory committee chaired by Dr. Homer D. Babbidge, Jr., the keynoter of the Colorado Springs conference. NACED was charged:

(1) to stimulate the development of a system for periodic gathering of information to make it possible to assess progress and identify problems in the education of the deaf;

(2) to identify emerging needs and suggest innovations that promise to improve the educational prospects of deaf individuals;

(3) to suggest promising areas of inquiry to guide the Federal Government's research effort in education of the deaf;

(4) to advise the Secretary on desirable emphasis and priorities among programs.

In planning the National Conference on Education of the Deaf, it was decided that a useful organizing principle would be to focus on the needs of particular age groups. The groups were arbitrarily defined as 0 to 5 years of age, 6 to 16, 17 to 21 and 22 and over. From the educational point of view, of course, these are not sharp and discrete groupings; but such a division seemed to represent a reasonable point of departure.

It was also decided that the participants concerned with each age category should remain together for the three days of the conference, rather than rotating from group to group, so that all groups would have an opportunity to develop and explore problems in depth. The plan called for the first day's discussion to center on medical-psychological factors, the second day to focus on management and educational considerations and the third day to take up government-finance responsibilities. In practice, however, the heat of lively discussion soon melted these arbitrary guidelines and the groups naturally followed their own direction; talk of a medical-psychological problem, for example, usually led to a recommendation on the same day for a program to deal with it. Accordingly, this report of the conference's deliberations retains the age groupings of the original plan but divides the groups' recommendations only into days, not broad subjects.

The recommendations themselves represent the consensus of the discussion groups, and votes were deliberately not taken. In this report the recommendations are listed in the most concise language possible, with amplifications and occasional dissent noted in the accompanying discussion.

One of the most difficult tasks in planning a conference of this magnitude and importance is the selection of participants. We regret that some who were invited could not attend. We are sorry, too, that the demands of space, finances and optimum size for group discussions made it impossible to invite many whom we would have welcomed as members. Every effort will be made to share the results of the conference with all who have any part in the education of deaf children.

We are grateful for the work of the Conference Planning Committee, and for the helpful suggestions made at a one-day conference in Washington in January, 1967, of the conference chairmen, co-chairmen, and recorders. Invaluable aid was given by Mrs. John Forsythe, executive secretary of NACED, and the members of the NACED office staff, Miss Judy Fein and Miss Linda

Kinney. We acknowledge with deep appreciation the contribution of the conference secretary, Miss Elizabeth Hanford.

Our profession and deaf persons everywhere owe thanks to Secretary of Health, Education, and Welfare John W. Gardner, and Assistant Secretary for Education Paul Miller for their encouragement and support -- and, of course, to all the participants who gave abundantly of their time and energy to accomplish the aims of the conference.

Finally, the conference members themselves wish to add a special note of thanks to the interpreters, whose dedicated and able work enabled our deaf colleagues to take an active part in the discussions. Without them, the accomplishments of the conference would have been sadly diminished.

S. Richard Silverman
Chairman, National Advisory Committee
on Education of the Deaf

A View from the Outside

Homer D. Babbidge, Jr.

A little more than three years ago the then Secretary of the Department of Health, Education, and Welfare invited me to serve as chairman of a committee to study the problem of the education of the deaf. My principal reaction was one of surprise. "Why me?" Apart from the fact that I was from Connecticut -- a state that has made some historic contributions in the field -- I had no apparent qualifications for the job. I had no personal or professional experience with deafness, or with the education of those so afflicted.

As it turned out, this was precisely my principal qualification, from the Secretary's point of view. From my discussions with him and his associates, it became clear that they wanted someone who had not been directly involved -- an outsider. I learned that the Advisory Committee was being convened at the request of Congress in an effort to sort out and appraise conflicting expert advice being given with regard to certain immediate problems in the field of the education of the deaf. It was hoped that a thorough review of the field by an impartial -- or at least representative -- group might bring some order where chaos threatened.

Now I'm not quite as much of an outsider today as I was three years ago. I lost my amateur standing the day we first met as a committee, and as I watched the deaf members of that committee take their oath of office -- in sign language. From that poignant moment on, I was involved.

i'm committed now, and a good deal better informed than I was. But I am still not a pro. I am still simply a citizen who cares. I'm still outside the profession. And it's in this role that I want to speak to you this evening. For it is my simple thesis that those of you who are professionally involved in the education of the deaf need us "outsiders".

Lest that observation seem vain, let me try and put it in perspective by taking you through a few of the steps by which I came to be educated, myself. For I think the way in which I learned and what I learned can shed some light on the promise and potential of the "outsider" in your work.

First of all, I -- and the other inexperienced members of the committee -- learned, for the first time, the profound nature of the affliction we call deafness. I don't think it is a misstatement of fact to say that outsiders look upon deafness as simply one of a number of afflictions that are classified loosely as handicaps. They lump it with physical disabilities in general, and assume that one is as unfortunate as another. The experience of many lay citizens is limited to cases of gradual and partial loss of hearing that come on with age -- the kind of deafness that bad jokes are made of. They would be appalled as I was by the realization that the child born totally deaf -- and otherwise normal -- comes into the world with a burden of staggering proportions. The realization that to such a child the simple concept of language as a basis for communication is totally alien -- and the recognition, at the same time, that self-fulfillment in our kind of world is so heavily dependent upon verbal communication -- makes the heart go out to these youngsters as it cannot in the case of any other affliction. Such deafness is, in my view, the most profound handicap a child can have. But I didn't know that until some of you educated me to it.

Our Advisory Committee learned that: "Language is the indispensable tool of learning acquired with little effort by the hearing child, but it is acquired only after great effort and determination by deaf children and their dedicated teachers.

"For a deaf child to learn to speak and to read speech on the lips and the expressions of others is a minor miracle -- but a miracle that is happening every day in hundreds of classrooms for the deaf throughout the country."

A second milestone in my own education was a realization of the complexities of modern deafness. I had not appreciated the extent to which "old-fashioned deafness" -- cases in which deafness was a single handicap -- had given way to complex conditions in which deafness is only a part of a multiply handicapped child's problem. I hadn't appreciated that the very successes of modern medicine had brought us face to face with a growing population of such multiply handicapped youngsters. The complexities of modern deafness -- its subtleties, its gradations, its nuances -- have, for all but the most general purposes, rendered the term "deafness" almost meaningless. The committee report said that, "It is difficult, therefore, to describe or define the 'typical' deaf person. Individuals who are termed deaf may vary widely in degree of hearing loss, in age at onset of hearing loss, in methods of communication used, in their attitudes toward their deafness, and in many other factors." It came to be apparent to me that the complex nature of deafness called for a range of educational and other efforts that were equally complex.

A third major revelation for me was the dedication of those who were working with the deaf. Their commitment seemed in many cases all-consuming. We found, over and over again, people who had literally pledged their lives to the cause of educating and otherwise caring for the deaf. The zeal of these educators was matched only by that of parents of the deaf, and others whose involvement was intensely personal. I should not have been surprised by this, in view of the feelings that had been stirred in me by my own limited exposure. But I certainly was impressed. Working often in substandard facilities and without adequate resources, the educators of the deaf presented a picture of dedication that one is not likely to see excelled. The committee was moved to report: "The doggedness and courage of the deaf person and the dedication of his teachers as together they battle to achieve communication -- the use of language -- and to use this vital tool in the learning process are deserving of the best that our society can offer in the form of understanding, of help, and of ingenuity in finding ways to make the task easier."

Now, another and related phenomenon I encountered was the strength of conviction that was evident among these dedicated professionals. I had been alerted to the century-old division between those who were loosely (and often mistakenly) classified as "oralists" and "manualists". But I'm frank to say that I was not fully prepared for the passionate advocacy that I encountered. I have never had an assignment that brought me the kind of mail I received --

and even still occasionally get -- on this subject. But the pungent prose was, I think, a reflection of the dedication of the writers. Each spoke with the feeling of one who has been intimately involved and earnestly committed.

But these evidences of dedication gave me -- and I suspect others -- a vague feeling of uneasiness. I felt as though I were intruding, as though I were peeking through the shuttered window of someone else's home. It was as though I had, without license, scaled the walls of a sanctuary -- a place in which only those who really knew the enormity of deafness were welcome. And once inside, I felt as though everyone wanted to take me aside and point out the errors of others. My sleeves were tugged by advocates bent on telling me that all was not well within the mansion and that I as a representative of the outside world should take that message to the authorities.

Now, I exaggerate for effect, I encountered scores of enlightened educators of the deaf, and what I take to be a growing number of professional people who have begun to concern themselves with aspects of deafness and its related problems, whose attitude was entirely wholesome and welcoming. But I have to say, in all candor, that as an outsider I was frequently made to feel like an intruder.

It is my considered conclusion that our efforts heretofore in the field of the education of the deaf have been unfortunately outside the mainstream of American life. I have no doubt that, historically, this originated in a kind of social rejection of deafness, the deaf, and the problems associated therewith. The pattern is familiar enough. We have seen society force other human problems into the dark backwaters of institutionalization. We have hidden the mentally ill, the retarded and other afflicted persons behind walls of "protective custody", and have preferred to pretend that they did not exist. And I suspect that deafness, too, has been among those problems that a Victorian society did not care to mention.

And if I am right that the picture of deafness was turned to the wall by an insensitive society, it is hardly surprising that a passionate sense of community should grow up among those so isolated. One of the patent dangers of submerging any social problem is that it may breed a degree of self-isolation that persists beyond the time when the larger society opens its eyes and extends its arms.

This is why I speak to you as an outsider tonight. I speak for a society that is ashamed that it has looked the other way when someone mentioned deafness. I speak for a society that is ready to repent. I speak for a society that has demonstrated that it is ready to come to grips with its problems.

Look what we have done in the field of mental retardation. By the single act of facing the problem -- openly and publicly -- we have "opened up the doors and let the sun shine in". We have begun to repair the damage of centuries of neglect, disinterest and rejection. We have made truly dramatic progress in the amelioration of the conditions of the retarded. We have launched a massive program of research that holds great promise. We have become aroused.

And this has been possible because of the help and support of "outsiders". Only a few years ago, retardates were the concern only of their families and a handful of dedicated professionals. But a few outsiders got interested, and -- what is important -- their interest was welcomed. That's when the action began. When Congressman John Fogarty of Rhode Island went to work, most citizens had no real grasp of the magnitude of the problem of retardation. John Fogarty gave visibility to the problem, leadership to the movement, and support to the cause. Now, mental retardation is recognized for what it is -- everybody's problem.

It is no mere coincidence that the Committee on the Education of the Deaf, which I had the honor to chair, was created in large part at the insistence of John Fogarty. For it was the genius of the man that he insisted that society acknowledge its problems and do something about them. John Fogarty was an outsider. He was a bricklayer by trade. He had no expertise to bring to bear upon the problems of retardation or deafness or any of his many other concerns. But he knew that these problems would yield to solution only if the American people and their representatives could be made aware, and brought onto the team.

It is my great hope that this is what can be done for deafness and for the problems of education associated with deafness. The time is ripe, it seems to me, to enlist the aid of the bricklayers and the legislators and the college presidents of this world. Certainly the recommendations of the Secretary's Advisory Committee on the Education of the Deaf are virtually meaningless without such support. The magnitude of the research effort we called for, the experimental and demonstrative efforts suggested, and the extensive reshaping of effort that was urged cannot be accomplished or realized in the absence of broad public support.

And it follows that another great hope of mine is that we historic "outsiders" will be welcomed in this cause. I pray that those of you who, in the absence of public interest and support, have devoted yourselves to the problems of deafness, can rise above the bitter memories of public indifference, and let us now have a piece of the action. We are, as I have said, repentant. We want now, however belatedly, to help. Please, in the name of a society that is, I believe, ashamed of its historic neglect, let us help!

The Whole Child:

A Plea for a Global Approach to the Child with Auditory Problems

Janet B. Hardy, M. D.

In a complex world, characterized by the exponential expansion of information in many fields, we find ourselves becoming superspecialists. We are forced to concentrate on knowing more and more about less and less. Under these conditions it is important sometimes to back off, and to change the focus, in order to obtain a wider field of vision, a broader perspective, and a deeper understanding. The purpose of this conference is to provide a multidisciplinary basis for a wider perspective on the deaf child and his education.

"Deafness" is a term which, in and of itself, I do not find very useful. Almost never is a hearing loss so complete, so absolute, that a child is devoid of hearing, or really deaf. Furthermore, the problem is complex and a young child who cannot hear all too frequently has other handicaps. It would seem more profitable to consider the child with a communication problem under four general headings:

(1) in relation to the specific nature, or area of his handicap;

(2) in relation to the presence or absence of other defects;

(3) in relation to his developmental level in general, and most particularly in language comprehension and use;

(4) in relation to his interaction with his environment, the immediate

environment of his family, and for the pre-school child, the more remote environment of the community about him.

Normal human communication is a truly remarkable achievement. It involves hearing, language comprehension and use, and speech. The child's ability to receive and perceive, to attend, to remember and to recall auditory experiences is directly related to his capacity to learn language meanings. In technical terms hearing is basically a kind of tactile sense with primary responses which are largely reflexive in nature, and which are important in alerting the individual to possible environmental hazards. In contrast, listening is learned behavior and a child's ability, or inability, to learn to listen, to comprehend and to use language in the expected normal developmental sequence is one of the best indices of his intellectual status available to us.

An analogy between human communication and a complex computer system is helpful in understanding the role of hearing in the total function of communication. The input side is, in this instance, primarily, though not exclusively, the ear (Fig. 1). Connected with this receiving apparatus is a complex circuitry, with a number of relay stations on the way up through the brain, to the cortical areas where the function of information processing takes place. Compilation involves the sorting, arranging, and frequently the storing of data received. Execution may involve sub-routines of searching and sorting, or it may result directly in the initiation and carrying through of the steps leading to output, in this instance speech. The normal human computer has

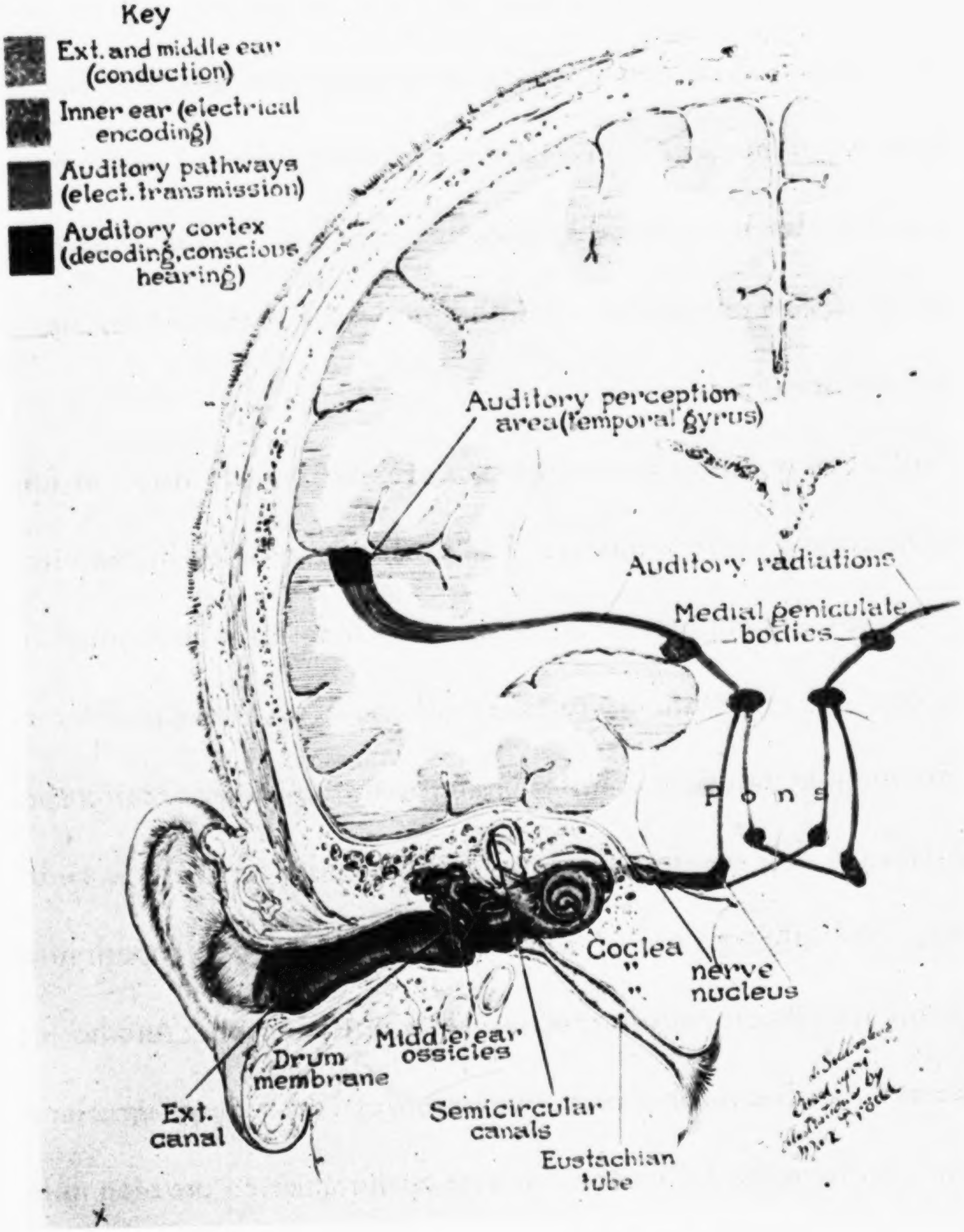
Key
Ext. and middle ear (conduction)
Inner ear (electrical encoding)
Auditory pathways (elect. transmission)
Auditory cortex (decoding, conscious hearing)
Auditory perception area (temporal gyrus)
Auditory radiations
Medial geniculate bodies
Pons
Coclea
"
"
nerve
nucleus
Middle ear ossicles
Drum membrane
Ext. canal
Semicircular canals
Eustachian tube

Figure 1. The neuroanatomy of hearing. Reprinted from the Enclyclopedia Brittanica by kind permission of Dr. John E. Bordley and the publisher.

tremendous reserves, and most important, it is capable of closing the circuit by monitoring itself, a crucial tool in learning.

The initial babbling of infants, the later jargoning, and the still later extensive word-play of normal young children are important opportunities for the child to experiment with, to monitor and to improve his own output. Like input, output also is mediated by complex psychomotor mechanisms superimposed upon structures concerned with other and more basic primary functions, breathing and swallowing.

Malfunction in any part of the complex system can result in failure of the owner to communicate properly. The locus of the break in the circuit may be in the receiving end of the system, in which case the individual is described as deaf, in information processing, in the output components, or in any of the circuitry in between. Unfortunately, in the communication problems of young children it is the exception rather than the rule for there to be a single defect. Multiple loci are of frequent occurrence. It is important to be aware of this likelihood both in diagnosis and in treatment. Another complicating factor is introduced by the development of "secondary" emotional problems resulting from the failure on the part of the child to develop normal patterns of communication with those in his environment. His problem is frequently misunderstood, and he is accordingly mislabeled as "hard-headed", inattentive, or mentally retarded.

Verbal communication is learned behavior. The learning process starts very early. We have observed neonates attend to and turn their head in the direction of soft, pleasant verbal stimuli. Normal developmental patterns parallel maturation of the neuromuscular system and development proceeds very rapidly during the first two or three years of life. The baby learns to listen before he learns to talk. He speaks as he hears and what he hears. As learning is at peak rates during the first two or three years of life the importance of the early recognition of deviations from normal patterns of development is obvious.

Etiology of Communication Problems

We will turn now to considerations of some possible etiologic factors responsible for failure of young children to develop normal patterns of communication (Table I).

Genetic determinants. Sensory-neural deafness on a familial basis has been well documented. This rare condition is probably not a clinical entity but rather a wastebasket into which a number of genetic defects are dumped. Such abnormalities may represent structural defects passed down through affected families, or they may result from biochemical defects, genetically determined. Examples of genetically determined deafness include the neural deficit encountered in Alport's disease and that in Wartenberg's disease. While we have no instance of deafness on a purely genetic basis among the 4300 children followed in the Johns Hopkins Collaborative Project, we are following two unrelated families where both parents are deaf-mutes; their children, both with normal hearing, did not begin to learn verbal communication until we intervened

Table I

Etiologic Factors in Communication Defects

(The Johns Hopkins Collaborative Study)

Time of Occurrence	Factor or Insult
Prior to conception	Genetic
Prenatal	Maternal - fetal viral infection Drugs taken by mother Fetal hypoxia Prematurity - low birth weight
Perinatal	Hypoxia/acidosis Mechanical trauma Hyperbilirubinemia Drugs given to infant Noise?
Postnatal	Middle ear infections Upper respiratory infections Foreign bodies in ear Drugs Meningitis Encephalitis, mumps, measles Trauma
Environmental Influences	Deprivation - lack of stimulation Emotional problems Mental subnormality

during the second year to assure the provision of verbal and other acoustic stimuli.

The problems of the premature child, particularly the child of very low birth weight (under 1600 gms. - 3 1/2 lbs.), are well known to all of you, and have been reemphasized by the recent publications of Katrina deHirsch and McCay Vernon. The concepts of the small for dates baby, and the "too big" for dates baby, and the multiple problems which beset these infants are becoming increasingly popular among pediatricians. Hypoxia, upsets in acid base balance, and hyperbilirubinemia, all of which have been incriminated in the etiology of communication defects, are of higher incidence in these babies than in infants of expected weight born after 38 to 42 weeks of gestation. Neurologic lesions resulting from hypoxia, acidosis, severe hypoglycemia and hyperbilirubinemia are usually found in multiple sites. The resultant problems are complex.

Drugs warrant mention because kanamycin and streptomycin, both ototoxic, are drugs of choice in the treatment of the gram negative infections of newborn infants, particularly the premature. Used in small dosage for short periods of time they are probably not a factor in communication problems, but it would be well for those of us who prescribe these drugs to be aware of the harm which may result from prolonged use or high dosage.

Noise. About three years ago we noted that some of the incubators in which small premies were placed were noisy. In fact, we turned them off in order to examine the chest with a stethoscope. The incubators were checked with a sound level meter, and the newer models at that time produced noise which varied between 80 and 93 db. sound pressure, at the place where the baby's head rested 24 hours a day for several weeks. The company, when alerted to the situation, redesigned the incubator to bring the noise down to acceptable levels. That the noisy incubators did harm is sheer speculation, but the noise level was presumably sufficient, and the incidence of communication problems for whatever reason is higher in premature infants.

Time does not permit detailed discussion of the various factors listed in the table. I wish to concentrate on the discussion of fetal defects following maternal viral infections during pregnancy. This is an area where there is important new information to be shared.

Prenatal viral infection. Hearing problems have been described following maternal infection during pregnancy with a number of viruses, particularly when the infection occurs early in gestation. Measles, mumps, chicken pox, and cytomegalovirus infections have all been incriminated on occasion. However, the data available are too scanty to provide any reliable information as to the frequency with which this occurs.

Maternal infection with rubella during early pregnancy was first recognized to be an etiologic agent in deafness in young children in 1941, by Sir Norman Gregg, an Australian ophthalmologist. A severe epidemic of rubella had occurred in Australia in 1939 and 1940. Gregg's observations of cataract, congenital heart disease, deafness, and other problems in the children of mothers with a history of rubella in early pregnancy was followed up by

Swan and his co-workers, and by Pitt and others. It was estimated that perhaps 80 percent of the children with a history of maternal rubella in the first trimester of pregnancy, followed to school age, had defects related to the maternal illness. Subsequent reports from England (Manson and Logan), from Scandinavia (Lundström et al.), and from the United States downgraded the risks very substantially. The lowest reported rate was approximately ten percent, from a study carried out over five years in New York, by Siegel and Greenberg (1960). This disparity in risk ceases to be quite so confusing when one considers the fact that these studies were based on a clinical diagnosis of rubella without the aid of laboratory tests. Rubella cannot be distinguished clinically from a number of other viral infections.

In 1962, rubella virus was isolated independently by Parkman and his group, in Washington, and by Weller and Neva, in Boston. This breakthrough led to the development of laboratory tools for the specific diagnosis of the disease. As the tools were being developed a major epidemic of rubella was brewing. This epidemic swept the Eastern seaboard in 1963-64, peaking in the Baltimore area in March and April of 1964. It spread across the United States, reaching the West Coast in 1964-65. As a result of our studies in collaboration with John Sever, NINDB, and those of others, a number of facts soon became clear:

1. Rubella virus is transmitted across the placenta from the infected mother to her fetus, particularly when the mother has rubella early in pregnancy.

2. Fetal abnormalities may follow subclinical rubella as well as

the characteristic disease with rash. The diagnosis here is a laboratory one.

3. The infected fetus may harbor the virus for weeks and months after infection. We have followed babies infectious through most of the first year of life.

4. Babies excreting virus from throat, urine, and stool are infectious, and can pass the disease to susceptible contacts.

5. Babies excreting virus may not manifest all, or indeed any, of the characteristic defects at birth. For example, we have followed one child whose mother had rubella at 60 days' gestation. The child weighed 3000 gms. (6 1/2 lbs.) at birth and appeared normal in all respects. However, rubella virus was isolated from her throat at birth, and at four and five months of age. At 18 months she is retarded; she has retardation in growth and a small head. At 24 months we heard for the first time a cardiac murmur suggestive of peripheral pulmonic stenosis.

6. Congenital infection may result in a broad spectrum of disease. Table II shows the distribution of defects in 199 children with congenital rubella followed by the Hopkins group. The diagnosis in these 199 children was "confirmed" by the isolation of rubella virus and/or the identification of serum antibody after four months of age in each case. The surviving children have been followed through at least one year of age, and as most of them were born between October 1964 and February 1965, many are now just over two years old. As you will note from the table, approximately 50 percent of the children

Table II

Characteristics of 199 Children* with Virologic and/or Serologic Evidence of Congenital Rubella

(The Johns Hopkins Rubella Study)

Type of Abnormality	Percent
Visual	20
Cardiac	35
Hearing	50
Development	54
Head Size	
Small	60
Large	6

*104 children born October, 1964 - February, 1965 have auditory problems. Table III shows some of the other kinds of problems encountered as a result of the chronic infection with rubella virus.

These findings are generally in accord with those of the other groups studying the problem. For example, the group in Houston, Texas reports auditory deficits at 18 months in a high percentage of the 100 children they have followed. Only 18 have normal hearing, 29 are definitely abnormal, and 17 are suspect with respect to hearing; 16 have been lost to follow-up and 20 have died.

We have had the opportunity to follow 1350 pregnancies in the Johns Hopkins Collaborative Project, terminating between January 1, 1964 and March, 1965. The laboratory work is still incomplete but on the basis of the data in hand on mothers and children it would appear that approximately 10 percent of the pregnancies were affected by the rubella epidemic. Unfortunately, only a relatively small percentage of children from pregnancies affected by rubella prior to the 16th week appear entirely normal through a year or more of follow-up. On this basis we predict that there may be 1000-1500 affected children in the greater Baltimore area. Half of these may have auditory problems. Approximately 250 young children are currently being followed in the Johns Hopkins Hearing and Speech Center as "rubella" children with communication problems.

While the risk of abnormality is greatest following rubella in the first trimester of pregnancy, defects have followed rubella prior to conception

Table III

Manifestations of Congenital Rubella

(The Johns Hopkins Rubella Study)

Chronic Infection	Secondary Defect
Pneumonitis	Low birth weight
Hepatitis	
Thrombocytopenia	
Anemia	
Meningoencephalitis	Microcephaly
Gastroenteritis	
Failure to thrive	Small body size
Chronic renal disease	
Hearing defects	

in a few instances, and in the second trimester of pregnancy in a larger number of instances. Deafness, retardation in growth and mental retardation are among the more common sequelae of second-trimester rubella.

Postnatal factors include the causes listed in Table I. I would like to comment particularly on the relationship between repeated upper respiratory infections, middle ear disease and delayed language development in young children.

Routine auditory screening has been done shortly after birth, and at four and 12 months in the Johns Hopkins Collaborative Project, and an extensive screening of language, hearing and speech at 36 months. The data for some 2000 children are still in the throes of being processed and final figures are not available. However, several factors are quite clear:

1. Auditory screening in the newborn period using a 60-70 db. stimulus has proven quite unreliable, presumably because of the very labile physiologic state of the neonate.

2. Conductive hearing losses can occur in very young children, even during the first year of life.

3. Language development is delayed at 24 and 30 months in children experiencing sustained or frequent respiratory infections. This is consistent with Omstead's finding that 15 percent of children without prior hearing loss had significant auditory deficits for six months after an attack of otitis media.

These findings indicate the need for careful and complete medical attention to the respiratory infection, which at present is all too frequently regarded as being trivial. It seems very obvious, but one must remember that conductive hearing losses can be superimposed upon those of the sensory neural type and that conductive losses can usually be cured.

Figures 2, 3 and 4 are from the Johns Hopkins Collaborative Project. They show the responses during the auditory screening test of a 10-month-old boy who had a moderately severe, 60-70 db., loss on the left and a milder loss, 45 db., on the right. His responses to quiet sound stimuli were slow and always to the right, even when the stimulus was applied on the left.

In Table IV the distribution of certain clinical findings in 1074 Project children with normal auditory responses during the first year is compared with that of 102 children who gave abnormal or suspect responses. Failure to pass bears a positive correlation to the presence of chronic respiratory infection and particularly to neurologic developmental status. Of interest is the fact that of the 16 children whose only unusual finding during the first year was failure to pass the test, several appear at age three to have severe problems in communication of the "central" language type. Several others score below 70 on the Binet at age four.

This simple auditory screening test is a useful tool. Failure on two successive occasions suggests the presence of a communication disorder and/or a developmental defect and is indication for a careful evaluation of the "whole" child.

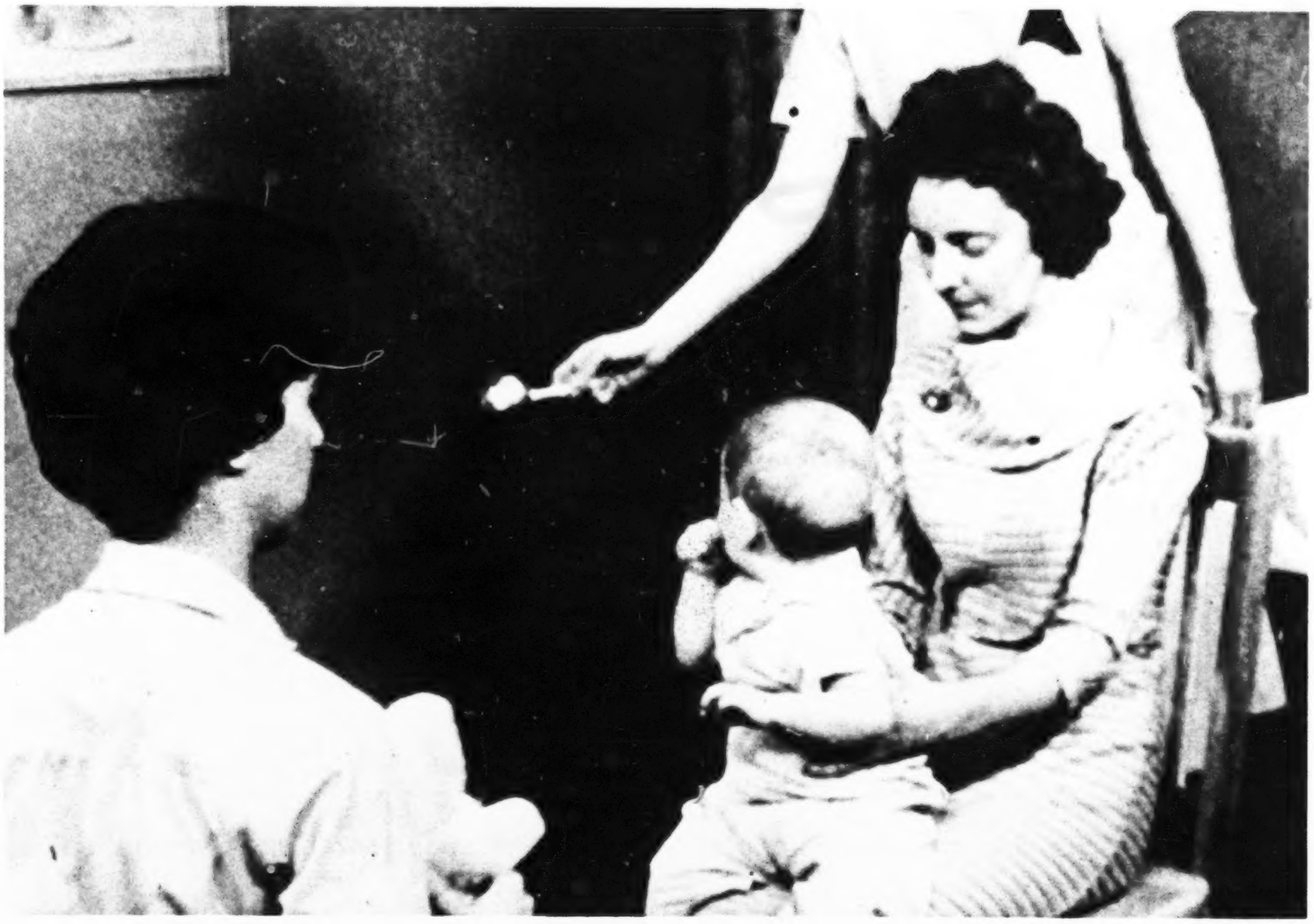

Figure 2. Auditory Screening. The Johns Hopkins Collaborative Project.

Response to mid-frequency rattle at 45-50 db. level.

This ten month old child had a conductive hearing loss

45 db. loss on right - 70 db. loss on left.

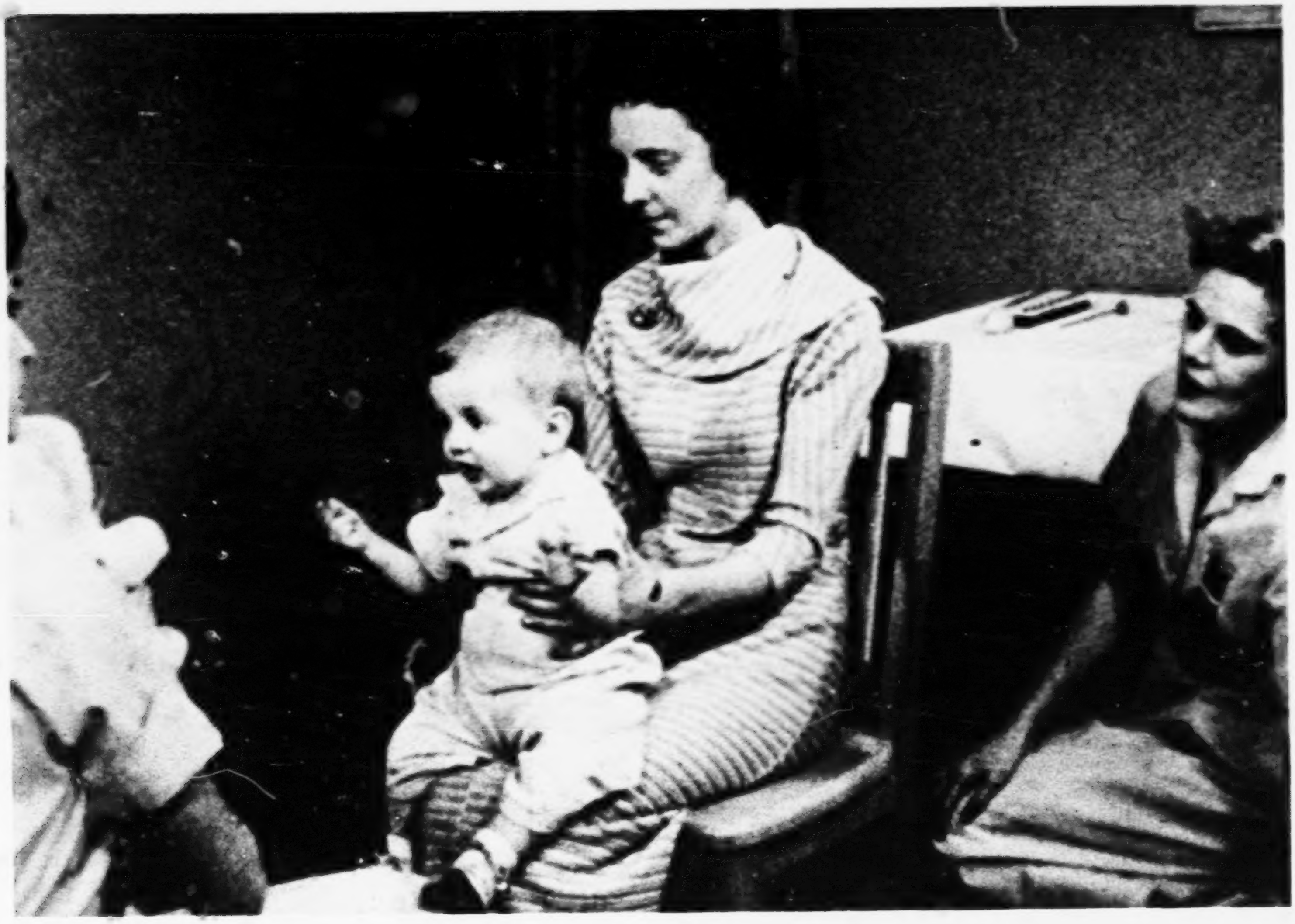

Figure 3. Auditory Screening - child shown attending to visual distraction - stimulus of high frequency unvoiced consonants applied at ear level on left.

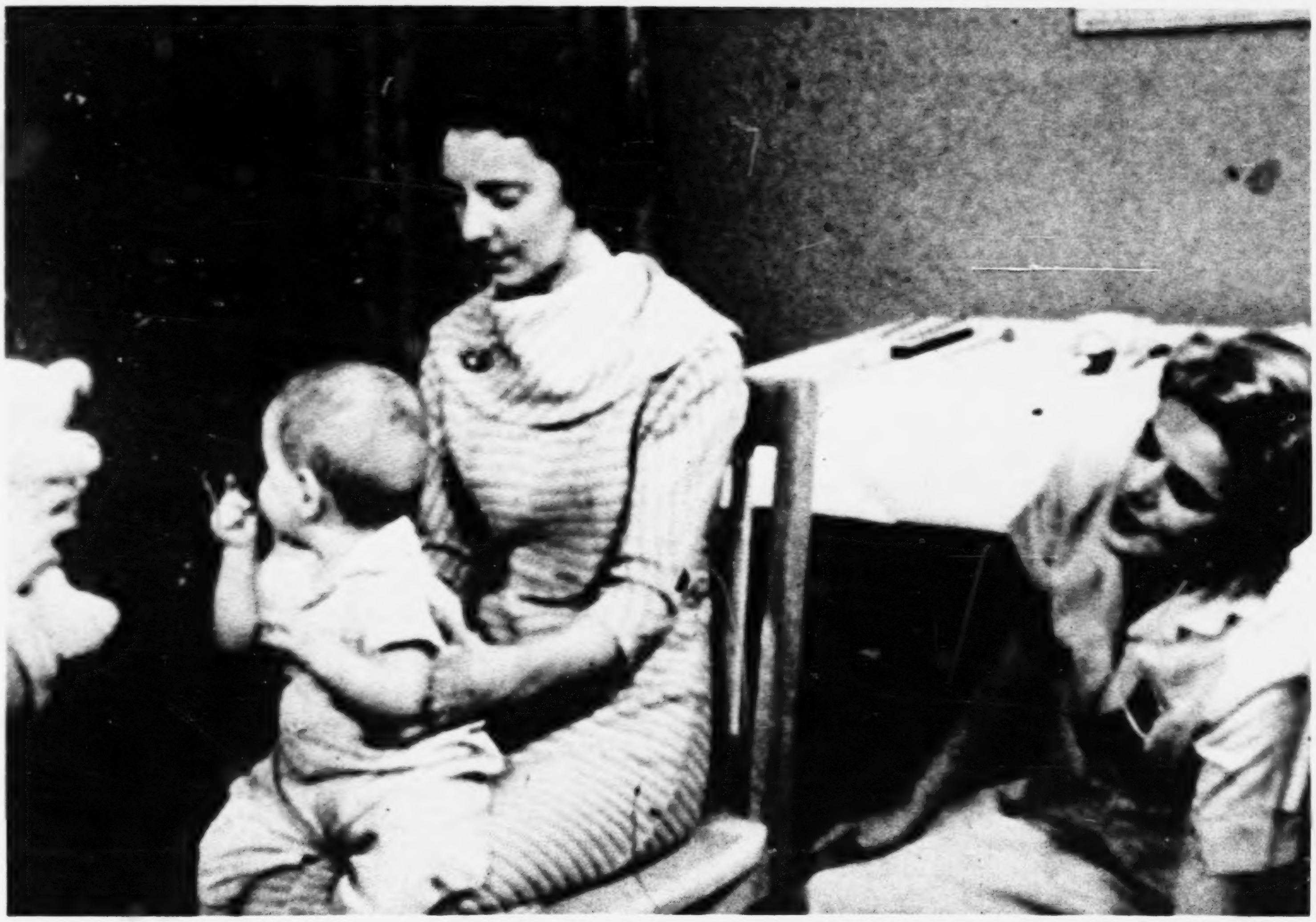

Figure 4. Auditory Screening - delayed response, but to the right which was the better ear, to the stimulus applied on the left.

Table IV

Other Findings in Infants with Normal as Compared with Abnormal or Suspect Responses to Auditory Screening*

(The Johns Hopkins Collaborative Perinatal Project)

(1176 Children)

Type of Auditory Response	Percent Distribution by Neurologic Status				Percent Premature by Weight
	Normal		Abnormal or Suspect		
	No R.I.*	Chronic R.I.*	No R.I.	Chronic R.I.	
Normal	74.8	6.8	13.1	5.3	
(1074)	81.6		18.4		10.5
Abnormal or Suspect	16	26	43	15	
(102)	42		58		24

*Preliminary report

In summary, I would ask you to cogitate about eight points:

1. Deaf children almost invariably have other problems.

2. Communication problems in young children are not static. The difficulties frequently change as the child changes with growth and development.

3. Remediation, both medical and educational, must be directed toward the needs of the "whole" child, not just to his communication problem.

4. Remediation must begin early; therefore, the diagnosis must be made early.

5. The pattern, or plan, for remediation must be tailored to fit the individual child, and will require to be changed as he changes.

6. Knowing the etiology can be helpful in terms of indicating the kinds of other problems a given child may have.

7. Knowledge as to etiology of communication defects is important to all of us, as the ultimate goal should be prevention -- of the primary defect and its secondary components.

8. An immediate challenge is the need to plan now for the identification and education of the many thousands of "rubella children" left in the wake of the 1963-64 and 1965 epidemic. They are now between one and three. They are upon us! They give us a unique opportunity for learning and for service.

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The speaker wishes to take this opportunity to thank Dr. William Hardy, Dr. John Bordley, Dr. Miriam Hardy and Mrs. Mollie Masland for their continued interest, help and encouragement over many years.

Mental Health and the Education of the Deaf

John D. Rainer, M. D.

For those of us who have been laboring for 12 years with the psychiatric problems of the deaf, it is indeed gratifying to see that we have reached the point where medical-psychological considerations are recognized as fundamental in the process of education, and where fruitful discussion of them is given time and priority in a conference such as this. I believe it is highly significant historically that emotional development and mental health are thus emphasized. In what I have to say I want to acknowledge my gratitude and indebtedness to all of these co-workers, and particularly to Dr. Kenneth Altshuler who has been a major collaborator in our program since its earliest days and shares with me our concern, our investigative endeavor and responsibility.

The active concern of psychiatry with the deaf is a recent one. In 1955, Franz Kallmann, a distinguished psychiatrist with an international reputation in research, was convinced by a group of educators, psychologists, and rehabilitation officials to turn his attention to the practically untouched field of psychiatry for the deaf. Kallmann was a man of wide curiosity, impeccable research methods and wide experience. He had had a few contacts with deaf families in the course of marriage and parenthood counseling, but was essentially an outsider to the area of deafness. As it turned out this was so much the better, for free from preconception, unafraid to question, and starting from the very beginning, he organized a highly skilled and competent professional team and embarked upon an unchartered venture.

I have recently wondered why it took so long for psychiatry to turn its attention to the deaf. It seems that this field would have been a natural attraction, full, as it has turned out to be, of theoretical insights, of social and community applications, and of much personal gratification. Probably it was the communication barrier, the frustration in not being able to use to the fullest the most common form of psychiatric contact, speech and language, and the apparent impenetrability of the deaf subject that kept our profession so long away.

In any event, we did come to initiate a thorough and fascinating project which still moves along, and I should like on this occasion to trace some of its ramifications relating to education and the schools. At the very outset of the program an appeal was made to educators at the meeting of the Convention of American Instructors of the Deaf in 1955 where Kallmann described our plans and asked for the counsel and cooperation of the membership of the organization. For the next three or four years a large part of our work consisted of accumulating a variety of data on the adult deaf population of our state. We received a great deal of cooperation and assistance from the schools in locating deaf persons, in studying certain pairs of deaf twins, and in general in pursuing the research aspect of our program. We began also to see school graduates, school leavers and school dropouts in our clinic and were asked occasionally to help with a particularly difficult psychiatric problem involving an older student still at school. However, during those early years we avoided the general exploration of emotional problems among students at schools for the deaf. For one thing, our Vocational Rehabilitation Administration sponsored program was particularly designed for older adolescents and adults. These groups had almost no resource for informed psychiatric counsel. There were social agencies that could occasionally refer disturbed adults to a general psychiatrist in the community, but such patients could find no special facility at all and therefore required our services the most. The schools on the other hand had a long tradition of education of the deaf, of supervision and training. Yet we were aware in the beginning of a certain degree of skepticism, sometimes almost mistrust for our program. Part of this feeling was certainly justified, since experiences in searching for psychiatric advice in the past must have been very frustrating. Part of it was probably defensive, reflecting the inertia and the real difficulty in facing the dissatisfactions in the educational field pointed out so constructively but frankly in the report of the National Advisory Committee.

I remember clearly, however, my last visit here to Colorado Springs and its inspiring surroundings, to speak to the meeting of the Conference of Executives of Schools for the Deaf in 1959. By then our project was four years old. We had had all we could do to determine the scope of the problem and develop a psychiatric clinic for the adult deaf. In that year however it was the president of the conference who asked us to explore quietly and circumspectly some of the problems of sex education and preparation for family life, and some of the problems of acting out, deviation, and maladjustment in this area, and to deliver a talk on these subjects in executive session at the meeting. We made a survey of the problem, we spoke to the school superintendents, we visited the schools, we spoke to the students. The report was received with interest if not unanimous agreement, for at that time there was still some fear and anxiety and distrust of psychiatry. That statement was our first official one in the field of preventive psychiatry, and it is essentially reprinted as Chapter 16 of our first book, Family and Mental Health Problems in a Deaf Population.

Now, although Dr. Kallmann has passed away, I feel here with my associates and colleagues that the matter has come full circle and that the psychiatric approach to emotional development is fully recognized as an integral part of education of the deaf. For this to happen both psychiatry and education have had to grow, and they have done so at a rapid pace.

As far as psychiatry goes, once the extent of the problem was outlined, the need for specialized services recognized, and the spade work done in setting up both outpatient and inpatient facilities, the entire clinical program was put on a permanent basis in the State of New York and the concept of special psychiatric services for the deaf began to spread to other states in the union, as well as to mushroom in a number of European countries. Some of these arose independently, others as direct offshoots of our program. Interest in the problems of the deaf has spread to various realms of psychiatric thought, such as psychoanalysis, community and social psychiatry, child psychiatry, and genetic and psychopathological research. One week before the present meeting, a special workshop was held in New York, attended by 40 psychiatrists from almost every state in the union, who as consultants to schools or rehabilitation agencies, or as hospital psychiatrists, or in private practice had had some degree of contact with the deaf. This workshop certainly aroused further interest in the field, disseminated information among the psychiatric profession and should make available by a contagion of interest an ever-expanding corps of professionals in the medical area of mental health. In 1968 a conference for non-medical professionals in the mental health field will extend guidelines to social workers, religious workers, rehabilitation counselors, and educators themselves.

What are some of the clear indications we found showing that emotional problems, difficulties in emotional development were affecting, modifying, interfering with the educational process? In our research, in our extensive interviews with the entire deaf population of New York State, we learned many facts about the deaf, some of them known before, others of them quite new. Let me outline some of those findings, because they are of direct pertinence to your deliberations. Of particular interest are the data we described under the heading Sexual Patterns and Family Relationships, and the heading Educational Background and Vocational Adjustment. These reports were obtained by interviewing deaf adults and represent their retrospective memories of their days at school.

Less than 20 percent of the deaf adults we interviewed in New York State had the experience of dating other than in group situations. More than one half had no experiences which could be described as dates at all and a full 10 percent had no friendly relationships whatever with the opposite sex, almost half of them having had no friends at all even among their own sex throughout the school years. The importance of these schooltime experiences for later stability and adjustment is reflected in the fact that marital adjustment in subsequent years appeared in our subjects to be related directly to length of courtship.

Regarding the area of sexual adjustment, our interviews indicated little actual sexual experience during the school years, but with homosexual activity more common than heterosexual behavior among those males who did admit some sexual experience during this phase of their life.

As I have said just before, initially we went no further into the school problems until asked to do so by the Conference of Executives. By the end of our pilot project, however, we had outlined a program of preventive mental health planning centered upon preparation for family living and an educational approach extending to all areas of the child's world, his reading, his studies, his recreation and his creative endeavors. Co-education, a thorough program of training in the biology and psychology of family living, and opportunities for deaf adolescents to meet others of the same age at various social functions were considered even at that time as indispensable parts of a mental hygiene program preventive in nature.

We made a statement then which might serve as a keynote statement now. Certainly education and vocational training are important, we said, but to be effective they require an emotionally stable student. While the individual with a sound foundation for healthy living in school and home has the best chance to achieve vocational and personal fulfillment, the result of neglect and ignorance is often discord, failure and disturbed behavior.

Turning to a second important arena of emotional adjustment, the vocational area, we found in our New York State population that the deaf had shared in the general trend toward increasing educational achievement. Almost all of those in our sample had had some formal schooling, with almost four percent having more than a high school education. In spite of this, more than 16 percent of them had left school before the age of 16 without graduating. Those who became deaf after age four had a greater chance of graduating than the congenitally deaf group or those whose deafness was acquired before the age of four, and girls were more apt than boys to graduate from grade school or go on for further education. Both oralists and manual communicators shared equally in the propensity to graduate from grade school, but in those who obtained higher education there was a larger percentage of oral speakers. In the vocational sphere, the vast majority, almost 90 percent, performed some kind of manual labor, more than one half of them skilled workers and the rest in the unskilled category. Importantly, there was no relationship found between the classification as skilled or unskilled worker and completion of grade school or school for the deaf. Significantly, 30 percent of those interviewed had had no vocational plans at all at the time they left school and 40 percent felt that their school training had been helpful in obtaining employment. These figures were very much in line with the nation-wide figures compiled at Gallaudet College, and to our mind they strongly indicated the need for expanded programs of vocational exploration, training, guidance and individual counseling during the school years.

Of compelling importance among the other areas of our investigation which have a bearing upon the role of the school is the problem of delinquency. The deaf persons whom we studied who had been arrested or imprisoned for various crimes included many who had been at one time expelled from school because of behavior problems unmanageable in the usual classroom or dormitory setting. It was clear to us and is even more clear today that special classes for deaf children with behavior disorders will sooner or later have to be established; in a large enough state or collection of states, perhaps actually special schools. Existing schools for the deaf are not equipped to work with these problem children. Whether due to brain damage, mental illness, or developmental disturbance, there is urgent need for educational provision for the exceptional deaf child, the one with multiple handicaps, including psychological ones. I know of a program in Norway which deserves careful attention in this respect.

I have discussed some of the areas of joint psychiatric and educational concern which pertain especially to the older child, the child growing into manhood or womanhood, into the world of work, the world of law and order. Behind these considerations lie many broad questions still far from fully answered about the special nature of the personality development of the deaf. To approach them, we may examine a force which the school cannot neglect, the paramount role of the parents and the family.

In our original descriptive study, we found that in families with hearing parents, by far the largest number, almost one quarter of our deaf subjects felt they had been overprotected by their parents while another sizable group felt they had been shunned by both their mother and their father. Those deaf people who were considered to have emotional difficulties were more often among these two groups than those who received equal treatment with their siblings.

If we want to explore family relationships more analytically, we may view them in the framework of our knowledge of psychodynamics and personality development. Of course, many difficulties arise in the earliest years of life; these can be mentioned here briefly. The normal progress of the infant goes from complete dependence upon his mother's care gradually to a state of emotional and material self-reliance. At first, the infant can barely distinguish himself from his mother, but gradually, as he begins to make his needs known and as they are met by her or withheld, he begins to see his mother as separate from himself. He then learns -- if one can call so complex a symbolic and affect-guided process learning -- he learns how to relate to his parents and subsequently to other people by a process of trial and error, reward and admonition.

One can see how lack of communication in these years may cause this process to go awry. In the very young child rejection, abandonment, and loneliness may cause extreme anxiety and withdrawal. Later on, and observable into the school years, the lack of outlet for restlessness and impulsive needs may lead to destructive behavior, temper tantrums and further alienation of the adults around him. Finally, perhaps most important in most cases, the free-and-easy process of learning how to relate to parents with all of its difficulties appears to be necessary in order to develop a social sense, a feeling for others, as well as a sense of self. Severe deficiencies may well result from isolation at home and later in school.

Implicit in this process is also the development of conscience, not only a theoretical knowledge or right and wrong, but of the inner voice very often derived in the hearing child from the outer voice of his parent, or of his teacher. No amount of reasoning, discussion or explanation conveyed through the unheard movement of lips or fingers or pencil on paper can really take the place of the direct sound of the human voice in conveying feelings or admonitions. As Freud put it, the conscience wears an auditory lobe. This experience has been verified over and over again in talking with parents and teachers who become frustrated themselves and who wonder about proper forms of discipline.

An interesting contribution in this respect is the observation by a Japanese psychologist, Nakamura, concerning the role of myth, fairy tale, and folklore in developing conscience and a sense of human values, in the last analysis a sense of being part of the human race with its total body of traditions and controls. Much of this sphere is inaccessible to many deaf children.

Problems of abstraction, of course, are also involved in conscience formation and impulse control. As someone said, to characterize equally as "bad" both murder and nailbiting substitutes a word for the richness of human moral judgment.

The role of speech in the early development of the ability to abstract and the ability to form relationships with other individuals was pointed out by Spitz, who found that the acquisition of speech, usually in the second year of life, marks the beginning of mental operations of an unlimited degree of complexity and places a host of new defense mechanisms at the service of the ego. Without these particular defense mechanisms there may ensue trouble in impulse control which may snowball as time goes on. Now while Spitz referred in this analysis to speech, there is little doubt that in fact these principles apply to communication and language, however they may be mediated.

This process does not end with the school years, however. Acting out in the psychoanalytic sense occurs under certain specific conditions of concreteness, impulsivity, and primitive modes of energy discharge. As described by Lesser, increased cognitive capacities during adolescence permit the teenager to revise and reintegrate his childhood problems, even if there were early defects in control. These capacities may not be equally available to the deaf.

Correlated with the problems of conscience are difficulties for the deaf child in handling power and strength, for the deaf child has the converse of the parents' problem. How is he to get his wishes across to the hearing world? How is he to make his mark upon them?

Finally, all of these considerations bear upon the self-image of the deaf youngster and adolescent, an image to which we cannot close our eyes no matter how disconcerting it is. Certainly it is hard for the educator, the parent, the doctor, having gained the confidence of the deaf child, to hear the child say, "We deaf people are stupid. It is unfair to be deaf. You will never know how we suffer." The deaf person as he grows older tends to deny these problems, at least most of the time, and it is tremendously inviting to go along with the denial, but the degraded self-image is a fact, and its amelioration is a primary goal of any educational endeavor.

One must of course not blame either the parents or the teachers of the deaf for the shortcomings that still exist. As the Advisory Committee's report states, the need for better understanding of goals and recommendations in no way diminishes the dedication and sincerity of those who have up to now been faced with these serious problems. And the teachers and parents of deaf children operate within a society itself still unknowing and often prejudiced, one which still offers too few opportunities to the deaf. But if the older deaf child already shows the results of some of the early developmental defects just now briefly described, there would still seem to be remedial measures that can be effective. Prerequisite to these, I would suggest, is better communication between parents, teachers, and psychological staff. Parental aspirations, especially as the deaf child grows older, seem to be either too high or too low, moving from unrealistically optimistic goals to frustration and complete pessimism. In group discussions which we have started with parents at a school for the deaf we have found that the parents of younger children in the first few grades of school are concerned mainly with the problems at home, particularly those of discipline and relationship with other siblings. In the older age groups, however, the parents are now involved in their sons' or daughters' preparation for life and their lack of understanding or communion both with their children themselves and with the schools regarding these problems.

From a research point of view, further direct study of early developmental patterns in the deaf child both in the family and school setting are urgently needed. Meanwhile, as far as the school is concerned, I would certainly recommend, in view of the problems that we have seen and of our experiences, that education for group living, and graded experience in social role mutuality, and family and peer relationships be part and parcel of the school program. These may be supplemented by proper facilities for individual trouble-shooting, attention to difficult psychiatric problems and continual interaction with parents and teachers. Some of these suggestions form part of the current phase of our New York Mental Health Program.

Until the day comes when progress in medicine and in genetics will prevent deafness itself, one of the greatest problems is for psychological and psychiatric understanding to catch up and interrelate with the educational process so as to make education in the truest sense of the word possible for the deaf. I look forward therefore to participating with you in this momentously important conference.

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Legislation and Education of the Deaf

Congressman Hugh L. Carey

The opportunity to visit with you at your meeting in Colorado Springs calls up vivid memories for me. Nearly a quarter century ago as a captain in the 104th Infantry Division, I trained for combat in Europe in this surpassingly beautiful region. I think it might be of special significance to this group, joined in the pursuit of excellence in education, to know that ours was a division that owed its survival as a unit to a unique educational program.

The 104th was the first major American combat force to conduct large-scale night ground assault operations. We made the night our friend and the darkness our ally. What we did was to develop new means of sensory communication.

Communication was the key. We learned to feel the presence of a friend by instinct. We used digital speech and hearing, signaling each other by touch and tap because sound could be a fatal giveaway.

You as leaders in the education of the deaf are now engaged in a new mobilization of communications to literally save the educational lives of America's children. You strive in a constant crusade to free our children from the distress of neglect and mediocrity. That crusade takes another stride forward with the opening of this National Conference on Education of the Deaf.

Workers for the deaf are in the vanguard of today's progress, improving the status of our handicapped children and gaining access to new advantages and opportunities for excellence for those who are not handicapped. Many of the advances and techniques in education for the deaf have application in teaching children with other handicapping conditions, and to the whole educational spectrum. We are within reach of the ultimate realization of the great goal of the deaf: clear communication among all people.

I commend the National Advisory Committee on Education of the Deaf and its Planning Committee for an outstanding performance in planning and structuring this meeting. The agenda addresses itself in depth to the specific goals and needs of deaf children and youngsters at progressive developmental levels from infancy through young adulthood. It focuses on the inner processes which beset the minds and bodies of these children. It views them as human beings with deafness added to the usual problems of growing up and preparing for active participation in our economy and society. Your speakers and participants represent the expertise of the contemporary scene in education of the deaf, as well as the effective leadership in general education, medicine, surgery, and psychiatry, in psychology and the physical sciences, in technology, industry and in government.

We are grateful to you for journeying here to Colorado Springs to give of your time and your talents, to press the drive for improved education of the deaf a meaningful mile forward. You come from all parts of the country, from some 27 states and from Canada. The list of the institutions and corporations represented, and the resource personnel is a roster of the nation's best: the Massachusetts Institute of Technology, the Bell Telephone Laboratories, the

Mayo Clinic, the Western Electric Company, the Council for Exceptional Children, the Johns Hopkins University Hospital, the Firestone Tire and Rubber Company, Michael Reese Hospital and Medical Center, the International Business Machines Corporation, staff of the Senate Committee on Labor and Public Welfare, and the U. S. Department of Health, Education, and Welfare -- which includes the office of our Chairman Dr. Paul A. Miller -- and such HEW constituents as the National Institutes of Health, the Children's Bureau and the Office of Education. This group of high-powered and influential thinkers deliberating on improving education for deaf children must bring forth new and effective ways to encourage further, widespread development of state and local interest. You inspire us to higher goals and encourage us to work harder.

I consider myself most fortunate to have a voice and a vote in the assistance that the federal establishment provides to encourage and support education for deaf and otherwise handicapped children. Some of these benefits are beginning to show as a result of the work of the 89th Congress -- I like to call the 89th the breakthrough Congress for exceptional children.

Previously the federal effort was piecemeal, scattered and fragmented in numerous agencies and bureaus. We lacked a realistic national policy in this field. Mediocrity was the norm, if a norm there was.

Rebellion against mediocrity began with the passage of the Elementary and Secondary Education Act of 1965. This act authorized direct assistance to meet the educational needs of children in public and private schools, whether they were poor or handicapped, or suffering the impact of having been born slumbound. Title I of this act began something between a confection and confetti of benefits to the handicapped in deprived areas.

The first ESEA amendment of specific benefit to the handicapped -- part of Public Law 89-313 which I had the privilege of introducing -- provided funds for handicapped children in state-operated or state-supported schools. With children in residential schools receiving benefits, the next logical step was to provide benefits for children in day classes. To accomplish this, we felt the need of a comprehensive review of federal programs affecting the handicapped. The *ad hoc* Subcommittee on the Handicapped was authorized in May and I was named its chairman.

President Johnson responded to the interest in Congress by directing HEW Secretary John Gardner to appoint a task force on the handicapped and on child development, to examine carefully every aspect and dimension of this problem. The chief executive took this action very fittingly on Independence Day, July 4, 1966; here are some of the words of his statement on the task force:

"There has been very little attempt to detect and correct problems that might cause children to fail in later life. If the resources of the school and the community can be brought to bear on these problems before they are damaging, the children and the nation will be greatly benefited. We must expend our national resources to help the handicapped and to prevent failure among our children."

The 12-member task force went to work under the highly capable leadership of Chairman Lisle C. Carter, Assistant Secretary of HEW for

Individual and Family Services. It has boxed the compass of this problem across the country and tested the strength and adequacy of the federal competence in doing its share to bolster other public and private resources. I told the Council for Exceptional Children on March 30 that the facts elicited and the figures computed in this study lead to a conclusion challenging any idea or presumption that we are really offering equal educational opportunity to all children according to their needs. The facts and figures show that we plan and program state and federal educational funds on the utopian thought that at least 95 percent of all children are educable in general education for so-called normal children.

A report I recently received from the task force faces up to the fact that handicapping conditions among children and youth add up to a major national social, educational, economic and health problem. Fifty million Americans have physical, intellectual, or emotional handicaps that noticeably limit their ability to carry on in normal life. Of this number, 14.5 million are children and youth. That the educational needs of these 14.5 million youngsters rate a high priority of concern in the administration and in Congress is evidenced by the findings of the task force and the subcommittee.

The reports of both of these concurrently laboring groups could provide the nucleus of a national policy that raises excellence in special education to the level of a moral issue -- and a good investment as well. We must not let the parade to prosperity and a full life pass by these 14.5 million young people, and thereby deprive the nation of their creativity and productivity!

Our ad hoc subcommittee hearings covered more than one thousand printed pages of testimony and revealed a number of shortcomings for the handicapped in the Elementary and Secondary Education Act. Together with Senators Hill, Morse, Javits and Robert Kennedy, we therefore enacted the new Title VI which I can call only a good but modest beginning. It provides grants to states to initiate, expand and improve programs and projects for the education of handicapped children in public and private schools. It directed the Commissioner of Education to create a special Bureau of Education for the Handicapped to strengthen and coordinate his programs in this area. Finally, Title VI directed the establishment of a National Advisory Committee on Handicapped Children to counsel with the bureau and help keep it moving on a forward course. Of the 12 members, at least one-half must be affiliated with educational, training, or research programs for the handicapped.

I am pleased to report that the states are busy drafting their plans for using the grants and have had the opportunity to review and comment on the Office of Education's proposed guidelines for administering the program. The Bureau of Education for the Handicapped is geared up and going. It includes the training and research grants for education of the handicapped, the planning for the state grants, and the captioned films for the deaf service. As for the National Advisory Committee, a slate of qualified nominees is now in the office of Secretary Gardner; his appointment of the committee will soon be announced.

The 89th Congress also put on the statute books two major acts of significance to deaf education.

With the highly effective support of my late and beloved friend and colleague, John Edward Fogarty, and that other great friend of the handicapped, Senator Lister Hill, we brought into being the National Technical Institute for the Deaf Act. As Public Law 89-36, it authorized a National Technical Institute for the Deaf, the first and only facility of its kind in the world. It is now under way at the Rochester Institute of Technology under the direction of Dr. Robert Frisina, formerly of Gallaudet, a participant in this meeting. Here is a new streamer on the ensign of excellence. It places teachers of the deaf and deaf people nearer to the benefits that science and technology now bring to education and communication.

The ad hoc subcommittee investigations revealed the complete lack of a good high school for the deaf anywhere in the United States. We did something about that with the passage of a bill establishing theModel High School for the Deaf in the Washington region. That is also just the start. I want to see high schools of this kind in each region of our country.

Important new legislation on education for the handicapped is currently before the 90th Congress. We will debate the bill in the House next week. As a result of recommendations contained in the bill which I presented on the opening day (H. R. 14), the President has included in his legislative package and message on education these three major proposals:

First, an amendment to Title VI to authorize regional resource centers for improvement of education of the handicapped. These centers would offer testing and evaluation services to determine the special educational needs of a handicapped child. They would also develop educational programs to meet these needs and assist schools and other agencies in their respective regions to provide such programs. Special emphasis would be placed on the use of instructional media, on the evaluation of available materials, and on the development of new media, techniques, and procedures necessary to help handicapped children to learn.

Secondly, he proposed another amendment to Title VI to provide for recruitment of personnel and dissemination of information on education of the handicapped. Here is an aggressive thrust to overcome the critical shortage of qualified teachers and other professional personnel in education of the handicapped. Less than half of the children who need special education services are getting them. This amendment would authorize support for a large-scale, nationwide recruitment effort to encourage students and others to seek careers in education of the handicapped. It is beamed toward all levels and types of personnel. The amendment also provides for dissemination of information about programs and activities in the education of the handicapped, and referral services for parents, teachers, prospective employers and others interested in promoting their cause.

The third proposal submitted to Congress by the President involves expansion of the captioned films program to include all handicapped children, but without slighting the present commitment to the deaf. This would assure that all handicapped children obtain the demonstrated benefits of the instructional media materials program established and carried forward so successfully by

Captioned Films for the Deaf. It would help reduce the time lapse between discovery of educational media and application in the field.

In passing, let me give you a few current service details on Captioned Films for the Deaf. The service reaches an estimated audience of 1.5 million. The circulation includes 16,500 prints of 220 educational film titles, and 2,640 prints of 220 recreational film titles. Recently the program expanded its service to include the lending of equipment to schools and special classes for the deaf. Kits loaned contain a projector, a table on wheels, and a screen. One thousand overhead projectors have already gone out and another 1,000 are being shipped; this will continue until all classrooms needing such equipment have ready access to it.

Legislation and implementation are moving along with effect and enthusiasm. Pleased as we may be with our deeds to date, you know and I know that much remains to be done. There are key challenges still unresolved in education of the deaf and we need to answer questions in a number of areas.

Professional Standards of Preparation:

What is the recommended prerequisite knowledge individuals need to enter on a career in the education of the deaf? What re-evaluation of basic standards for professional preparation of teachers of deaf children is needed so that they may be up to date and reflect in their work the latest and best knowledge in the field? What are the minimum standards for training beyond the master's level in deaf education? How can the related professions of psychology, social work, and learning management extend their training to encompass attention to the problems of deafness? Finally, what standards should apply in the training of subprofessionals, such as teachers' aides and child care workers, and which new programs can we devise to prepare these persons?

Home Tutoring Programs:

How can demonstration programs in home tutoring, such as those at John Tracy Clinic, Central Institute for the Deaf, and the Bill Wilkerson Center, be extended throughout the country?

The Multiply Handicapped:

The rubella epidemics of 1964-65 increased the number of hearing-impaired children by some 5,000 to 6,000. Because of the virulent nature of this epidemic, it is also estimated that many of these children will have more than one handicap. If they do not get help soon, some of their most meaningful learning years are lost. The needs of these children may well be different from those which most schools for the deaf are able to meet. Therefore, new techniques are required -- and soon -- to assure these children an adequate education. Who will develop these answers? The clock is running.

Secondary Education:

Educators of the deaf must increase the amount of knowledge learned by the deaf child, for our complex society requires increasingly better education in order to meet even minimum levels of self-sufficiency. At the same time the gap between the deaf child and his hearing peer has widened. How can this gap be narrowed? How can automated teaching affect this problem?

Should the pending vocational education act be revised to better serve the handicapped?

Adult Education:

The Labor Department has indicated that the average worker will change jobs at least five times in his work life. Means must be afforded the deaf worker for opportunities to be retrained. This will increase the need for adult education. Who will do this training? Can machines and films be developed to help meet this need?

Technology:

Electro-acoustic advances may provide rapid breakthroughs in education of the deaf. Vocoders and transformation hearing aids may make parallel sensory systems available for transmission of auditory stimuli. These may dictate entirely new avenues of instruction.

The utilization of automated instruction also raises many issues. The questions include how this material will be incorporated into existing programs, who will design the hardware, who will provide the curriculum and course structure, and -- of course -- who will finance these programs. (If I have my way, the federal government will undertake the financing -- we have waited long enough for others to respond.)

Research Needs:

The assimilation of language is recognized as the most difficult educational obstacle for a deaf child. Hearing children assimilate language auditorily almost unconsciously. Often taken for granted, this assimilation and its significance are frequently not considered in terms of the educational and socio-economic burdens imposed on a deaf individual. A great deal of research has been devoted to the developmental aspects of language in the hearing child. Naturally, these studies are based on the fact that language is acquired through hearing.

In the area of the deaf, a great deal of research has been devoted to the etiological factors of deafness and to techniques for the utilization of residual hearing through amplification. Results of such research range broadly, from the highly beneficial to no benefit at all. This is an area where factors such as the magnitude of hearing loss, age of onset, educational and social environment, etc. are all variables. A good deal of time, money and effort has been expended and the results are not necessarily laudatory, for the language problems of the deaf continue.

Is it possible, ironically, that by pursuing a solution to this problem through utilization of a defective sense we are off course? It seems obvious that something should be done to determine if language can be totally or partially assimilated through the utilization of the non-defective senses of deaf children -- visual, tactile and kinesthetic. Little, if anything, has been done along this line and perhaps it is a blind alley; but someone should take a look.

We ourselves should take a keen look overall, and speak up for a fair share of federal aid for the handicapped.

I mentioned before that in the financing of education we are riding along with the fictional concept that at least 95 percent of our children may be provided for in general education programs for so-called normal children. This is out of line by any standard of measurement, since we find that as of 1965 there were 14.5 million children with handicapping conditions. This population represents 20 percent of all eligible beneficiaries. They are also a segment of the system which requires considerably more expensive, not average, services. Yet, only five percent of our resources go to their benefit.

I told the Council for Exceptional Children and I tell this Conference: "We should begin with crib therapy, first by detecting handicapping conditions at birth and then by bringing the benefits of modern special educational techniques to bear in alleviating those conditions. This would require a redistribution of funds and the adoption of a more realistic approach than we have had thus far, to build up a supply of trained teachers in special education and special facilities for children with hearing and mental deficiencies."

I am about to start a quarrel and a quest in the Congress with this idea in mind, and I want you on my side. An amendment to Title V of the Social Security Act is pending before the House Committee on Ways and Means. This amendment will extend and improve the federal-state programs of child welfare services under the public welfare system. This legislation does not specifically mention deafness or any other handicapping condition, or provide for any aid to the parents of the handicapped child.

I want for these children what we have successfully enacted for their grandparents. Prenatal and early catastrophic deficiencies must be as great a concern as those of the elderly, as a matter of legislative justice.

I therefore suggest that "naticare" be the next step after Medicare, to bring the full resources of modern medicine, therapy, technology, research, education and home care to every handicapped child without one cent of cost to his parents.

I know some will say that this brings security from the cradle to the grave. My answer is that if we gave due care before birth and at the cradle we would save the child and often the parents from a living tomb or an early grave. While I am organizing a crusade for naticare, there is an immediate job to be done; and again I want your help.

The Congress has authorized $50 million for Title VI of ESEA for fiscal year 1967 and $150 million for 1968. No funds have been appropriated as yet to this title. A modest supplemental appropriation to finance state planning to implement the grants is now pending.

Procrastination and short-changing where handicapped children are concerned mean unfair treatment of youngsters starting out with two strikes against them and holding a broken bat.

That's where knowledgeable and effective people like you come in. Keep feeding us your ideas, your suggestions, and your recommendations to increase the chances for these children to reap the benefits of education that is up to date and in keeping with their needs and capabilities. Let the power of your voices and influence be heard and felt throughout the land, so that the drive to promote and support educational opportunities for handicapped children will keep rolling forward.

In closing, I want to recognize and acclaim two milestone anniversaries we celebrate this year and to greet a newcomer expected to appear shortly on our scene. We mark, this year, both the centennial of oral education for the deaf in the United States, and the sesquicentennial of the first permanent school for the deaf in this country. Both of these occasions will be suitably observed in the coming weeks. The anticipated arrival is that of the first federally supported facility to house a research and demonstration center for the education of handicapped children. A $2 million grant to Teachers College, Columbia University, for construction of the facility was announced a few days ago by the U. S. Commissioner of Education, Harold Howe, II. This trio of related events reaching over 150 years reveals the lasting, yet ever-emergent importance of your fine work.

I wish you well in your conference. Call on me for help. You have the assurance of my best effort to bring your ambitions to reality on behalf of the education of deaf and other handicapped children.

Problems of the 0-5 Age Group

Summary of Discussion

Dealing with the problems of deaf children in infancy and the pre-school years, this group focused first on the need for early identification of hearing problems. It was recommended that the 0-3 age group be considered a special entity within the pre-school category because of the compelling need for valid and reliable detection techniques, the significance of this period for language stimulation and acquisition, the necessity for parent guidance and counseling, and the possibility of preventive and therapeutic medical intervention.

The group recommended intensified research in testing for hearing problems in children in the first year of life, and even the exploration of methods for prenatal testing. It was stressed that the current goal is not to achieve a perfect score in identification, but to raise the probability of making valid predictions and to reach all deaf children in their first year. Once hearing problems have been identified, emphasis should be placed on parental orientation and education to provide for the child's total needs.

Systematic, state-wide reporting of children with hearing problems was urged, together with increased efforts to enhance public awareness of the problems of the deaf child. The group suggested that general diagnostic centers be established, perhaps supplemented by regional centers to care for children in remote areas. Integrated centers for research, training, clinical and educational services should be established in universities. All of these measures would help solve the urgent need for better liaison between various agencies and workers in the field, and better dissemination of research findings.

The group also stressed the needs of the multiply handicapped deaf child, emphasizing that the goal should not be to institutionalize such children but to provide broad services as early as possible in hopes of eventual placement in schools.

Age Group 0-5: First Day

1. A "high-risk register" to facilitate identification of young children with hearing problems should be adopted immediately for use by the medical profession and other agencies and qualified persons throughout the country.

The high-risk register is a checklist of factors which may contribute to the development of auditory and other impairments. Its use would heighten the probability of identifying children with hearing loss. The following register, usable as it stands, was proposed at the Toronto Conference on the Young Deaf Child as a step toward developing an effective identification program (1):

I. Antenatal
   A. Positive family history of deafness
   B. Familial biochemical abnormality associated with deafness
   C. Blood incompatibility
   D. Virus infection during early pregnancy
   E. Bleeding, especially during the first trimester
   F. Drugs, notably any of the mycin group or quinine

II. Complications of labor
   A. Premature delivery
   B. Fetal distress due to maternal shock, etc.

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(1) The Young Deaf Child: Identification and Management (October, 1964). Proceedings reported as The Young Deaf Child: Identification and Management. Acta Oto-Laryngologica, Suppl. 206, Stockholm, 1965.

C. Prolonged or precipitate labor

D. Difficult delivery; traction on neck or birth injury

III. Neonatal difficulty

A. Apnea or cyanosis

B. Cerebral birth injury

C. Jaundice—hyperbilirubinemia (15 mg/cc and above)

D. Multiple anomalies, from whatever cause

E. Possible iatrogenic trauma, as noise of an incubator, drugs (notably streptomycin and kanamycin), etc.

IV. Factors in early childhood

A. Infections, such as meningitis and measles

B. Chronic respiratory infection and/or allergy

C. Injuries

D. Hyperthyroidism

E. Abnormality of external ear

V. Possible social factors

A. Maternal mental retardation

B. Socio-cultural deprivation; poor child care, etc.

C. Emotional problems

(Items I, II and III are the particular concern of the obstetrician; items III, IV and V that of the pediatrician.)

The high-risk register program should probably be administered at the state level. It would develop lists of the names of babies in whom the risk of auditory handicap is substantially higher than for the general population. These babies should be followed closely, especially during the first two years, and definitive testing should be carried out if deviations in auditory development are suspected. Intervals for observation, suggested at the Toronto conference, were 0, 3, 6, 9, 12, 18 and 24 months of age.

Incorporation of the register into hospital records would routinely give the physician assuming responsibility for the child valuable information as part of the case history. A child born of a rubella pregnancy, for example, would be clearly identified. Doctors receiving such information could be expected to keep their own records with more than usual care, and the continuing case records would be available to local school districts for their guidance when the children are enrolled.

While hospitals and other agencies should be encouraged to use the register, its availability to individual physicians -- along with instructions for its use -- should help them discharge their own responsibilities and encourage more detailed case histories with regard to hearing impairment, based on a heightened awareness of etiologic factors and subsequent effects.

It was emphasized that any such device should be used on a voluntary basis. Legislation requiring definitive screening for infant hearing disorders would be untimely and inappropriate; not only would it impose serious enforcement problems, but such screening of infants is a professional matter that should not come within the purview of compulsory legislation. In the hands of the family doctor and other agencies, the register would supplement other means of locating deaf children; it is not intended as a substitute. All possible means must be explored to locate not only identifiable existing cases, but potential ones as well.

2. Other means, of a more global nature, should be explored to identify deaf children. The public information media should be used to make hearing loss as common a concern as cancer and heart disease.

Screening on an individual basis, whether in the neonate nursery or elsewhere, apparently gives a relatively low yield for the vast expenditure of time and money involved. Data storage and retrieval also pose problems.

In framing the global, community approach that is the intent of this recommendation, the group used the analogy of a medical emergency at a theater. The stage manager would ask, "Is there a doctor in the house?" rather than canvass each member of the audience. Similarly, the approach to screening should be, "Is there a deaf child in the neighborhood?" -- a question in which widespread interest could be stimulated by more intensive public education.

3. To enable very early detection of hearing problems, the possibility of prenatal testing techniques should be further explored and development of such techniques should be encouraged.

How the fetus perceives auditory stimuli remains a question, but some exploratory procedures in this area, including use of conditioned pulse response, have recently been reported (2, 3, 4). A difficulty with this research has been the possibility that loud sounds which have commonly been used to stimulate the fetus may have resulted in tactile stimulation. Johansson, Wedenberg and Weston (2) avoided this problem by using a high frequency stimulus at 3000 Hz. A change in the pulse rate of the fetus was considered as a reaction of the auditory system, and definite reactions were reported in the 26th week of uterine development. A byproduct of this research may be further data relevant to the developmental physiology of hearing.

4. Testing of newborn infants and children six to 12 months old should also be investigated, with particular attention to the question of cost-effectiveness.

A project testing large numbers of neonates has been carried on at the University of Colorado Medical Center for the past five years (5, 6, 7). This program, employing a high-frequency signal (3000 Hz) and direct observation of reflexive behavior, offers the hope that lay volunteers with sufficient insight might be trained to screen infants. An even simpler project involves a yes/no judgment of infant response to a broad-band auditory stimulus. At the other extreme, electro-physiological approaches, possibly including electrodermal measurements and measurements of evoked cortical potential, appear to offer promise at three to five months of age. Such approaches, however, require sophisticated instrumentation and personnel, and their use would probably be restricted to medical environments.

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(2) Johansson, B., Wedenberg, E. and Weston, B. Measurement of tone response by the fetus. Acta Oto-Laryngologica, 57: 188, 1964.

(3) Murphy, K. P. and Smyth, C. N. Responses of fetus to auditory stimulation. Lancet, 1: 972, 1962.

(4) Grier, J. B., Counter, S. A. and Shearer, W. M. Prenatal auditory imprinting in chickens. Science, 155: 1692, 1967.

(5) Downs, M. P. Audiometry in children (infants). Int. Audio., 1: 268, 1962.

(6) Downs, M. P. and Sterritt, G. Identification audiometry for neonates: a preliminary report. J. Aud. Res., 4: 69, 1964.

(7) Downs, M. P. Organization and procedures of a newborn infant screening program. Hear. Speech News, 35: 26, 1967.

Clinicians place increasing confidence in the validity of hearing tests performed on infants six to 12 months old. A large proportion of children in this age group are seen at city and state-supported well-baby clinics, and the vast majority of children in higher-income families are seen routinely at this age by family physicians and pediatricians.

Despite the possible significance of the early months of infancy for later mental health and language development, clinicians and educators can show success in language instruction with children referred as late as two years of age. Thus, while awaiting development of tools for very early detection, efforts to work with children detected at later ages should not be diminished.

The possible negative aspects of early testing techniques must also be borne in mind. Random reflex action must be carefully distinguished from true auditory impairment when reflexive behavior of infants is used as the response indicator. There is also the risk of premature publicity about efforts that are still in stages of research, the possibility of early mislabeling with resultant psycho-social-educational dangers, and the danger that over-zealous treatment could lead to exploratory tympanotomies that are unnecessary. In addition, hearing aids may be indiscriminately applied despite some uncertainty as to the validity of diagnosis.

In fact, from a purely medical- and surgical-otolaryngological point of view, one specialist presented evidence that little value would accrue from neonatal testing. The evidence suggested that measurement at the six- to 12-month level is more definitive and significant, and that failure to diagnose hearing problems in the first six months rarely adds to the problems.

5. As attention is focused on the early identification of children with hearing impairment, plans must be made and implemented to meet their total needs as early as possible after diagnosis. Parental orientation and education should be included as prime goals, as well as guidance and education of the child, and amplification when indicated.

The sooner hearing loss is detected, the higher the chances of rehabilitation. Yet substantial evidence suggests that there is still a significant lag in providing clinical, audiologic, educational and psychological services regardless of the age at which hearing loss is diagnosed. A delay in diagnosis and treatment denies the deaf child an opportunity for amplification, which would allow him to assimilate language in a manner similar to that of a normally hearing child, as much as he is able. The delay also postpones the initiation of other teaching efforts that would help his language development.

The degree and quality of auditory stimulation clearly play a major role in the normal development of language, even in the hearing child. Culturally disadvantaged children, who are seldom spoken to and are otherwise neglected, tend to have very little command of language (8, 9, 10). Work in psycholinguistics also indicates that language development is primarily related to the richness and timing of language input.

Recent experimental studies have shown that sensory deprivation in animals causes impairment that may be permanent (11). Other data on children enrolled in a school for the deaf suggest that similar deprivation in deaf children, resulting from delayed educational procedures and delayed sound amplification, may produce an additional handicap to learning (12). The group urged that investigation should continue to ascertain whether early sensory deprivation causes a failure of normal development of the central nervous system itself.

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(8) Brodbeck, A. J. and Irwin, O. C. The speech behavior of infants without families.' Child Developm., 17: 145, 1946.

(9) Rheingold, H. L. et al. Social conditioning of vocalization in the infant. J. Comp. Physiol. Psychol., 52: 58, 1959.

(10) Freud, A. and Burlingham, D. T. Infants without Families. International Universities Press, New York, 1944.

(11) Barnet, A. B. Results of sensory deprivation. In The Young Deaf Child: Identification and Management. Acta Oto-Laryngologica, Suppl. 206, Stockholm, 1965.

(12) Elliott, L. and Armbruster, V. Some possible effects of the delay of early treatment of deafness. J. Speech Hear. Res., in press.

The fact that mother-child relationships are essential to the emotional development of the child has been well documented. Hearing children, for example, deprived of a mother figure, develop more slowly physiologically as well as mentally (13, 14). When undetected, difficulty in hearing can lead to a similar type of deprivation, since parents expect certain types of behavior from their children which serve as feedback and reinforcement for the mother's own caring behavior. When the child's responses are absent or inappropriate, mothers become frustrated and uncomfortable and may unwittingly hold back from contact and the valuable stimulation of language.

Parental orientation to the problems of deafness is therefore of particular importance, for it is obvious that parents are always the child's first teachers. But deafness, or any communication disorder, requires that parents be educated to help in the successful understanding and management of their child. This can best be done if there is early identification of the problem itself, and in some cases may require direct therapy for the parents, provided by competent professional personnel. The goals should be to enhance the parent-child relationship and to provide and augment the rich language input that is necessary for the adequate development of language. Whenever possible, this input should be through the most efficient sensory channel, the auditory.

6. The relationships between language input and output should be

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(13) Riessman, F. The Culturally Deprived Child. Harper & Row, New York, 1962.

(14) Deutsch, M. The Disadvantaged Child and the Learning Process: Some Social, Psychological and Developmental Considerations. Columbia University Press, New York, 1962.

studied more thoroughly, both in deaf and in normally hearing children.

While the data suggests that phonological development moves briskly in the hearing child, the characteristics of language input (e.g., quality and frequency) required for normal language development are not known. It appears, however, that hearing children learn linguistic rules inductively at a very early age, and that these linguistic rules cover a wide range of skills and abilities such as prosody, grammatical rules, naming, sequencing, etc. (15).

Even less is known about the development of language in the deaf child, although anecdotal material has been reported (16). Empiric evidence on the earliest linguistic activities of the profoundly deaf child indicates that he babbles, but little data is available and there is even disagreement about whether his babbling differs from that of the hearing child (17).

Despite our uncertainties about how critical each month, week or "stage" may be, it must be recognized that infancy is a reactive, not a passive state. The acoustic system appears to be the vital sensory modality for language acquisition, but associated systems such as the tactile and kinesthetic may also be important. Studies should therefore be directed to exploring the roles of these other senses.

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(15) Carroll, J. B. Language development in children. In Psycholinguistics (S. Saporta, ed.). Holt, Rinehart & Winston, New York, 1961.

(16) Simmons, A. Language growth for the pre-nursery deaf child. Volta Rev., 68: 201, 1966.

(17) Carr, J. An investigation of the spontaneous speech sounds of five-year-old deaf-born children. J. Speech Hear. Disord., 18: 22, 1953.

7. Medical schools should play a more active role in educating their students to their responsibility for the early management of deaf infants.

Not all parents live where specialized help is available. In such cases, the responsibility for early management devolves upon the physician.

Doctors of many specialties may have a role and a responsibility in the diagnosis of these children. At present, the burden of these responsibilities is assumed irregularly by the otologists, pediatricians, neurologists and general practitioners involved. Some apprise parents of diagnostic implications and make clear referrals for help, but other physicians do little more than diagnostic evaluations. If medical schools were to provide more emphasis and better coverage of the sequellae of hearing loss, each doctor would be encouraged to better work for immediate and continued care. The pattern of education whereby the ophthalmologist has been taught to assume enlarged responsibility for children with impaired vision may serve as a model.

If medical schools and associated teaching hospitals could be included in a regional program, participation in following up the cases of deaf children might also be enhanced. This in turn could help focus the attention of staff and students on the need for, and practice in, early and accurate diagnosis.

Age Group 0-5: Second Day

8. Deaf children should be encouraged to express their emotional needs and intimate feelings toward parents, siblings and other inhabitants of their personal world. If oral communication fails to serve this purpose, other means should be used.

Any approach that enhances mental health should be explored, particularly in the crucial first five years of the deaf child's life. Parents should be encouraged to learn to communicate with their young deaf children in the most relaxed and natural way possible, dealing with the children as normal, healthy youngsters so as to minimize the effects of the handicap.

9. The 0-3 age group should be considered a special entity within the pre-school category. Specialists in this sub-group should be aggressively recruited, and specialized training should be organized. A conference should be held, preferably within a year, specifically on the deaf child from 0-3 years of age and his family. A publication, similar to Educational Recaps, is needed to spread the research data being accumulated in this area.

Until recently, most teacher preparation programs have focused on the deaf child of elementary school age. Only recently have a few programs been remodeled to include pre-school preparation, and even fewer concentrate on the 0-3 child. There is an urgent need to pool all information on the 0-3 child and provide guidelines in the areas involved, including child development, counseling and guidance, pediatric audiology and early language development. The necessary personality attributes of the teacher and counselor for children of this age must also be determined. Such teachers need special knowledge, which should be provided in training centers staffed by audiologists, psychologists, social workers, pediatricians and other specialists.

Some private and public programs for the 0-3 child do exist, with such activities as home visit programs, clinics, parent institutes and the like. However, information about their activities and procedures has not been adequately broadcast to other interested professionals or to the lay public. A conference on the 0-3 child should aim to build up more knowledge, assess current programs in the light of what others have done, spread the available knowledge, and encourage training of more personnel to specialize in this age group.

10. Demonstration center projects should be developed in university medical centers or other suitable environments to provide integrated programs of clinical services, research and training in the broad areas of human communication.

Much of the existing research into problems related to deafness (speech and language learning, sensory physiology, perception and cognitive function) is not being used by those working with the deaf simply because it has not been labeled "research on deafness". Demonstration centers in human communication would help to correct this; they should be guided by senior staffs, affiliated on a part-time basis, who also maintain contact in their primary professional areas to avoid parochialism.

Such centers would be ideally equipped to provide training and continuing research for all professions that touch on communication disorders.

Similarly, professional activities at present are often so fragmented that it is possible for one child to receive several different evaluations, diagnoses and dispositions. Demonstration centers would permit integrated, continuing evaluations and programs, and would encourage specialists in many areas to share their information and evaluations.

11. Since it is generally recognized that some deaf children do not learn to communicate successfully by the oral method, universities should pursue serious and sustained research into possible reasons for this failure, as well as the potential for non-oral adjunctive modes of communication.

Specifically, this research should include: Use of non-oral methods as an instructional adjunct and communication method for pre-schoolers; the possibility of transmission of abstract information about linguistic rules through manual communication; exploration of the usefulness of "cued speech"; a study of the usefulness of manual communication in improving lip-reading and speech; and studies of deaf children who have not been successful in oral communication, taking into account such factors as methods of instruction, environmental reinforcement, personality structure and the like.

It was also suggested that research be supported in the development of intelligence (thinking) in deaf children, and that educational techniques should be designed to stimulate intellectual functioning in deaf youngsters. Just as the "new" teaching approach to science and mathematics, designed for hearing children, has attempted to circumvent the linguistic limitations of these children, so new and more effective nonverbal devices might be developed for deaf youngsters. At the same time, research should recognize and explore the distinction between linguistic deficit and intellectual functioning.

12. The multiply handicapped deaf child is not now adequately served. State and local agencies should try to use existing research facilities to explore diagnosis and early training of these children, and should also use existing special educational facilities for programs serving multiply handicapped children at all levels. The possibility of a national research institute in this area should also be explored.

Inter-disciplinary research will clearly be needed for better diagnosis, understanding and management of the multiply handicapped deaf child. However, it also seems clear that the "multiply handicapped deaf child" is not a single entity and cannot be served by any single type of facility. Programs to serve these children should be stimulated within existing state facilities for the blind, the orthopedically handicapped, and the emotionally disturbed and retarded, using specifically trained personnel. Where the number of such children is not enough to justify separate handling by individual states, multi-state regional cooperation will be necessary. Funding and new enabling legislation may also be needed.

13. Universities should provide professional preparation specifically for personnel who will work with deaf children who have multiple handicaps.

Teachers and other personnel now dealing with the deaf child need additional skills and knowledge if they are to diagnose and deal with additional handicaps. Similarly, pediatricians, psychologists and other specialists need further specialized knowledge in dealing with handicapped children who are also deaf.

Age Group 0-5: Third Day

14. Each state should develop a plan, with federal aid where necessary, to provide comprehensive guidance for the child and educational and counseling services for the parents of deaf children. Such services should be provided as soon as deafness is diagnosed, and they should be provided without charge and regardless of the age of the deaf child.

Despite the encouragement provided by Title VI of the Elementary and Secondary Education Act, states have not established enough programs to provide this type of service. Present knowledge justifies immediate development and implementation of such programs, even though modifications and improvements will be needed as a result of further research and experience. Details of the programs should remain a local prerogative, but their goals should be comprehensive and should include parent counseling and speech and language development. Federal aid should be available even in the planning stages.

15. States should establish general diagnostic centers, closely linked to existing educational programs, to make periodic comprehensive evaluations of deaf children and report the results to parents and educators. After initial hospital diagnosis, repeated evaluations at ages three and five are recommended. States should also use and consult existing private facilities in planning and developing these centers.

Outside of the large population centers, there are frequently too few deaf children to justify separate facilities entirely devoted to the hearing handicapped. However, few communities are totally without access to some institution where care is available. Therefore, cooperation with existing local educational and medical systems is desirable. Moreover, such cooperation would maintain community interest in hearing problems and facilitate community education. Contact with diagnosticians would help educators recognize and deal with hearing problems, particularly in areas of low incidence where supportive professional help is not readily available.

Continuous and cooperative diagnosis would also help ensure rechecks and the correction of any incorrect diagnoses or management recommendations, and the centers could aid in anticipating and planning for such emergencies as the recent rubella epidemics.

16. States should also consider plans like the one recently proposed in Illinois, providing regional diagnostic centers and schools distributed so that no child has to travel more than two hours from home.

There may be many valuable guidelines in this plan to care for the child who lives in outstate areas. The plan would provide the child with both family life and educational and diagnostic facilities, and would offer parents a chance to participate in school affairs. Since these centers would serve about 100 children each, possibly in wings attached to public schools, homogeneity of classes would be possible. At the same time, deaf children could also be integrated, whenever possible, into the regular school program. Residential facilities would be provided when needed, but all children would return home for weekends. The diagnostic centers attached to the schools would provide opportunity for continuing diagnoses and follow-up. Professionals from various disciplines could be utilized, and supportive professional help would be available to teachers.

17. Systematic, state-wide reporting methods should be established to give comprehensive data on deaf children and to facilitate both health and educational planning.

As the recent rubella epidemics clearly indicate, such information is vital in estimating future needs and services for deaf children. Even where programs may deal with apparently non-educable children, early diagnosis and referral can provide a great deal of help to parents. The data should include information beyond the audiological, specifically including such other handicaps as blindness, mental retardation and the like.

18. There is an urgent need for better liaison and coordination among the various agencies and personnel concerned with deaf children. Available information on diagnosis, education and care must be more widely disseminated, and the public must be given more information about the services that are available to the deaf.

To avoid unnecessary duplication of services and to help minimize the lag between diagnosis and the beginning of services, agencies planning new programs in hearing, speech or language should consult such professional and government bodies as the American Speech and Hearing Association, the Alexander Graham Bell Association for the Deaf, the American Instructors for the Deaf, the Department of Health, Education, and Welfare, and state agencies concerned with health and education.

Agencies concerned with research on deafness and the preparation of teachers for the deaf should act to reduce the wide gap between information that is available and information that actually reaches the classroom teacher. Way stations are needed to interpret scientific data in lay language and make sure it is disseminated.

There is also widespread evidence that parents of deaf children are not availing themselves of existing services because of lack of information and organization. New legislation is providing more extensive and refined services, but many professional and lay people are unaware of the new developments even in their own communities. The group endorsed the federal bill, now pending, that would publicize services available to the deaf.

19. Agencies providing programs for children 0-5 years old should be offered guidelines outlining a consistent philosophy, a coordinated curriculum, adequate ancillary services and standards of supervision.

Some of the states' special education programs may have set up day classes that have too few children to permit classroom homogeneity, qualified full-time supervision or the necessary medical and ancillary services (there was some disagreement within the group on this matter). Classroom teachers may be expected to assume many diversified duties and to deal with children of too broad an age range and degree of handicap. A National Education Association pamphlet (18), soon to be released, recommends that teachers in this position be given two hours each day, free of classroom duties, to take care of parent counseling, staff meetings and the like, as well as to develop communication in the children she is supervising and to work with other professional personnel within the school.

20. Legal barriers to the employment of qualified deaf persons in education should be removed.

21. Special programs should be started to prepare supervisors of teachers of deaf children at all educational levels, with special attention to the 0-5 age group. Adequate stress must be placed on medical, audiological, psychological and early child development areas.

There is a great scarcity of supervising teachers, despite the fact that they are key individuals in educational programs for deaf children. It is the supervisor who is responsible for coordinating the curriculum, helping new teachers to develop their skills, and applying new knowledge to the total program. To help remedy this shortage, the U. S. Office of Education should give special emphasis to developing programs for supervising teachers.

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(18) Olsen, H. C., Jr. Summary of Proposals, Remaking the World of the Career Teacher. National Commission on Teacher Education and Professional Standards, National Education Association, Washington, D. C., 1966.

The group noted that a national conference, scheduled to be held within a month of the present meeting on education of the deaf, was to discuss the administration and supervision of day classes (19).

22. The use of volunteer and sub-professional teacher aides should be considered, and model training programs should be explored.

Several schools and school systems are already using teacher aides successfully. Extending this use may well prove to be a practical way of lessening teacher burdens and relieving the critical shortage of teachers. The possibility of short-term (e.g., six-week) training institutes for teacher aides should be explored.

Use of teacher aides may also provide a partial solution to such anticipated problems as the management of large numbers of rubella children.

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(19) The National Research Conference on Day School Programs for the Hearing Impaired, Lake Mohonk, New York, May, 1966.

Problems of the 6-16 Age Group

Summary of Discussion

Since this age group includes most of the school years, the group concentrated most heavily on educational problems. The emphasis, however, was on the need to tailor educational programs to the child, not the reverse; and the group stressed that educational programs should aim for maximum development of the whole child to enable him to lead a well-adjusted life in the community.

It was recommended that urgent attention be given to sophisticated assessment of the deaf child's educational needs and capacities, and to finding out how these compare with those of hearing children. A study was urged of deaf adults who could be considered high achievers, to determine what characteristics and variables contributed to their success. To provide a quick reference on whereabouts -- which would serve as an aid in planning -- the group urged a national census of the deaf population.

Also stressed was the need for assessment of present educational programs, methods and knowledge, and for training those who come in contact with deaf children to participate in the assessment process. Improved communications and liaison among the various professional and lay workers was urged; on a broader scale, a public information program was suggested to keep the public and professions alike informed of current data and programs.

The group found a pressing need to improve, unify, coordinate and continuously assess curricula for deaf children; to train more supervisors of teachers of the deaf; and to provide more and better state programs for deaf children, with improved coordination and more extensive use of existing facilities.

The needs of the multiply handicapped deaf child must also be studied, the group emphasized, with particular attention to educational facilities, curriculum and teacher training. Especially in dealing with multiply handicapped children, educators were urged to accept more responsibility in arranging for the counseling of parents, and to make sure that help is available for dealing with psycho-social as well as educational problems.

Age Group 6-16: First Day

1. Improved techniques for measuring the capacities of the deaf child must be developed.

Historically, education of the deaf has focused on methods and programs; the child, in effect, has been fitted to the program. Educators are beginning to recognize the diverse needs and capacities of deaf children (1), and trying to develop programs to meet their individual requirements (2). Yet there remains a pressing need for improved instruments of quantification, instruments to assess intellectual, social, maturational and educational development at various ages, and to provide thereby the clear understanding of the capacities of the deaf child.

Critical stages of maturation should also be compared in deaf and hearing children to determine whether and how they may differ. Interests as well as needs of deaf children must be identified and explored, so that motivation for learning may be intensified and curriculum materials be made more meaningful.

2. A national study of deaf adults who would be considered high achievers (by criteria yet to be established) should be made, to identify the unique characteristics and emotional variables that contributed to their success.

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(1) Lane, S. Research and its application to the classroom. Volta Rev. 66: 480, 1964.

(2) Symposium on research and utilization of educational media for teaching the hearing impaired. Amer. Annals of the Deaf III: 508, 1965.

3. There should be consultation among federal, state and private agencies to develop ways to assess programs, methods and curriculum used in the education of deaf children. This assessment should focus on the child and his needs.

So that educational programs will fit the particular needs of the child, including therapeutic needs where indicated, assessment should center on the learner himself. It should be longitudinal and should include data from preschool examinations and developmental history as well as school performance. The assessment program should be set up so that it is available when a need arises, as well as being fixed to a regular schedule at intervals which must be determined. All professional disciplines related to the school program should participate in the assessment process; parents, house parents and other members of the school community may also be involved.

Assessment should be addressed to the whole child, with contributions in such areas as ophthalmology, audiology, neurology, social work, pediatrics, otology, psychiatry and psychology. The need for medical evaluation in areas other than those dealing with auditory problems deserves special emphasis.

The time lag between assessment and implementation of any recommendations must be made as short as possible. In line with this point, if transfer of a child to another school is a possibility, the staff of the second school should be involved early in the assessment process.

Federal government and private agencies should share responsibility with the state governments in assuming the central planning role in a flexible assessment program.

4. Training programs should be established to help teachers, parents and para-professional aides in observing and interpreting the behavior of the child and assessing his progress.

Assessment takes many forms in the school program. It should include trained observation of a child's behavior in addition to the usual standardized tests.

Teachers, house parents and other lay personnel should be enabled to participate in this evaluative process, each at his own level of responsibility. This may require innovation at the pre-service level for teachers, and in-service training for both teachers and house parents; this could be accomplished through workshops, selected demonstration programs and practice evaluative sessions under the supervision of other professionals.

The discussion stressed the real difference between observation and interpretation of a child's behavior. The proposed training program should lead to objective observation, from which interpretations can be made that are free of preconceived notions.

House parents especially need to know how to observe what is meaningful in behavior that seems out of the ordinary, and to make their observations free of personal bias. Temper tantrums, for example, are always bothersome but do not always call for discipline. Similarly, staying up late may be an expression of troubled insomnia, or simply adolescent mooning.

5. Schools should provide opportunity for communication between

evaluative personnel, on the one hand, and teachers and house parents on the other. School personnel should respond to assessment by modifying their programs and attitudes, when necessary, to help the child.

Case conferences should be held periodically, utilizing the team approach and including teachers, house parents, social workers, medical personnel, psychologists and others concerned with the child being evaluated. These conferences should be part of the ongoing assessment process and should serve as a vehicle for interpreting its results.

The first necessary step is to achieve an understanding of a child's current aptitudes, problems and level of development. Constructive modification of his behavior can only follow, however, if the adults concerned can alter their own attitudes and behavior as dictated by the evaluation results. For example, discovery of a visual handicap in a deaf child who was thought previously to be mentally defective can lead to an effective change in approach only if all personnel working with the child are made aware of the full implications of the discovery.

Other results of more informed observation, for example in the area of sexual development, should help schools in the social and hygiene education of their children. In addition, fuller consultation should strengthen relationships among the educational staff. Fuller opportunities for exchanging information should also be extended to parents of deaf children.

Age Group 6-16: Second Day

6. An institute, workshop or similar program should be held to focus attention on the urgent curricular needs of the hearing handicapped.

As with all education, the objectives of programs to teach deaf children should include the maximum development of each child's entire potential -- academic, intellectual, social, physical, emotional, vocational and spiritual (3). The goal is to permit the individual to lead a well-adjusted life, to reach a level of success consistent with his aspirations and ability, and to assume the responsibilities of a citizen.

With this in mind, a wide array of highly specialized professional personnel should meet to work out (1) guidelines for evaluation of existing curricula, (2) objectives for curricula that will focus on the needs of deaf students and be directed to the parameters of psycho-linguistic age, social development, level of cognitive processes, and interests at various maturational levels, (3) the encouragement of regional curricular planning appropriate to specific geographic areas, and (4) the modification of teacher preparation programs.

7. Basic criteria should be developed to help schools evaluate their own total educational programs.

These criteria should be capable of general application in a variety of educational settings, to insure uniformity of measurement tools and to make possible comparative evaluation across schools. This would also facilitate interpretation of transfer records of pupils who are moved between schools in different geographic areas. However, it is anticipated that different sets of criteria will be required, depending on the aspect of the program being evaluated (communication skills, mathematics, social-recreational programs), the type of school (day or residential), and the characteristics of students (age, variations in degree of hearing impairment).

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(3) Kopp, H. G. Cooperative development of curriculum procedures in schools for the deaf in Report of the Proceedings of the 42nd Meeting of the Convention of American Instructors of the Deaf. U.S.G.P.O., Washington, D. C., 1966.

Evaluation of programs includes the assessment of all aspects of school life that may affect a child's development. As an example, the evaluation of mathematics programs would include development of criteria for assessing the curriculum and the success of techniques of instruction of students with varying aptitudes, levels of education and types of handicap. The magnitude of the task is striking; all aspects of each program in each type of school must be examined.

The group considered a number of ways to implement this recommendation, but could not agree on the most effective means. This suggests that a committee of experts in education of the deaf and related disciplines should be appointed to look into the question.

8. Demonstration programs should be developed to test and evaluate new teaching methods and materials.
9. To ensure that every school for the deaf has a qualified supervisor of teaching, regional programs should be begun to train qualified teachers to become supervisors and

to provide in-service training for existing supervisors who are without formal preparation.

The supervisor of teachers is a key figure in achieving excellence in an instructional program, but many schools and classes for the deaf are without qualified supervisors. In some areas, visiting consultants are attempting to fill this vacuum; in others, principals or head teachers with other responsibilities assume the role of supervisor.

Regionally centered programs should be established to train qualified teachers of the deaf to become supervisors. In addition, regional institutes or workshops should be offered periodically to provide in-service training for those now supervising who have not had formal training.

Preparation of supervisors should enable them, under the guidance of school administrations, to set, enforce and evaluate standards of curriculum and staff performance; to maintain liaison among the various personnel and professional disciplines; and to schedule the academic load of teachers. With these goals in mind, supervisors should be offered courses in general supervision and administration, curriculum development, and practicum and internship in evaluation of deaf children. Courses which would help in the individualization of instructional programs and provide advanced professional preparation in education of the deaf and related areas should also be offered.

10. Educators should give serious consideration to their responsibility for parent counseling, including the psycho-social and genetic, as well as educational areas.

Educators must consider the needs of the entire family of the deaf child if they are to provide a successful program of care of the child himself. Cooperative arrangements with community agencies should be considered to discharge this responsibility. In particular, parents of multiply handicapped deaf children may need supplemental and highly specialized guidance.

The group stressed that educators should not assume the functions of such professional personnel as psychiatrists, genetic counselors, psychologists or social workers. However, educators can and should take responsibility for recognizing psycho-social problems, arranging for consultation with appropriate specialists, and interpreting and following the specialists' recommendations.

Age Group 6-16: Third Day

11. Each state should establish an administrative unit within the state board of education to concentrate on the education of deaf children, and staff it with qualified personnel. Where such units already exist, they should be strengthened.

Systematically and periodically, these units should evaluate available facilities and programs for the identification, assessment and education of deaf children from infancy to adulthood. Plans should be developed for services comprehensive enough to meet the diverse needs of all hearing handicapped children. These units should also assume major responsibility for developing liaison among various state programs so that the best educational placement of each hearing-impaired child is ensured, and for devising effective local procedures to provide for a smooth flow of students from one type of program to another.

By virtue of its functions, such a state unit can be expected to devise plans to accommodate those deaf children who are mentally retarded, emotionally disturbed or otherwise multiply handicapped. Such programs must be in addition to the existing public and private day schools, residential schools and programs integrating deaf students into classes for the hearing.

States should be encouraged to pool resources with other states to set up regional programs when the deaf population is too small to warrant development of effective single-state plans.

12. NACED should explore ways to help state boards of education in establishing new facilities for the deaf, improving liaison and coordination among existing programs, and training personnel.

As it now stands, state officials often have no legal responsibility for the education of pre-school deaf children. Some show little interest in the education of the hearing handicapped, as indicated by the assignment of speech therapists or other unqualified persons as consultants.

Even in states where interest is high, such assignments may eventuate because of the absence of well-trained personnel. Low salaries and a general shortage of educators often prevent state units from obtaining and holding qualified personnel or establishing teacher preparation programs. Thus, the short supply is perpetuated.

13. NACED should explore ways to take and maintain a regular national census of the deaf, including the multiply handicapped.

Such a census would provide a quick reference for data on the entire deaf population, establishing previous whereabouts and reducing delays in obtaining information about children whose parents may be unable or unwilling to supply it.

The recent rubella epidemics dramatize the need for such a central store of information on persons with deafness of all etiologies. Even after the results of these epidemics are fully appraised and the needs for service are met, the census would continue to be a valuable tool for program planning. It would be useful in predicting what kind of personnel are needed, where, and in what numbers. Early awareness of personnel needs and programs required could help ensure that multiply handicapped deaf children -- often excluded from current programs -- can be properly served. For example, many mentally retarded deaf children are now enrolled in inappropriate programs or remain at home.

NACED should implement this recommendation, establish the intervals at which the census should be taken, and decide how to disseminate the results most usefully. The group recommended that the census of the hearing impaired should include data on the etiology of hearing loss and the presence of other handicaps. It should also include information from audiological evaluations whenever possible. The possibility of coordination with other censuses already under way was noted.

14. NACED should investigate the needs of multiply handicapped deaf children, particularly in terms of educational facilities, curriculum, and teacher training.

While interest in the mentally retarded has been high, mentally retarded deaf children are now excluded from most educational programs being offered, even though they may be trainable or educable.

Study will be needed to determine whether multiply handicapped children should be separated according to their handicaps, or combined in one center. Similarly, consideration should be given to ways of using existing services for the disadvantaged to serve the hearing-impaired with multiple disabilities.

The blind with hearing defects are a small group, and certain programs for them have been well established. However, there are serious questions about the adequacy of available programs for the deaf with other physical or emotional disabilities. NACED should consider ways to assess and meet the particular needs of the visually impaired, the orthopedically handicapped, the homebound or hospitalized, the brain-damaged and the emotionally disturbed deaf child.

15. NACED should develop a public information program, stressing reporting of federal government programs and activities concerning the deaf.

A wide-ranging program is needed to keep the public and all relevant professions informed about NACED's own activities and plans as well as those of other federal agencies. Educators and other professionals working with the deaf have a deep interest in these projected developments. Provision should also be made for feedback from professional personnel in the field to NACED, and appropriate procedures should be established.

Problems of the 17-21 Age Group

Summary of Discussion

This discussion group, dealing with deaf children in late adolescence, was concerned chiefly with the deaf youth's effective socialization in the school, work and community environments. Educators were urged to stimulate peer group experiences with hearing young people, to set relatively high educational goals, and to provide realistic counseling and vocational guidance. The use of field trips to industrial firms, public agencies and the like, and the involvement of business and labor representatives in instructional programs, were suggested as methods to help the deaf adolescent adjust successfully to adult living. The group also stressed the importance of reducing discrimination against the deaf, both in employment and in such areas of daily life as the licensing and insuring of deaf drivers.

Better coordination of educational, medical and psychological services for deaf youth was urged, with such specific recommendations as the naming of state advisory groups to coordinate state programs and the appointment of a supervisor of education for the deaf within each state's board of education. As a catalyst for better coordination within the states, the group also suggested that the U. S. Office of Education establish a program of extension activities offered through the state education agencies, similar to the present extension program of the Department of Agriculture.

Teams of visiting professionals were recommended, to bring specialized skills to schools and programs for the deaf. All professional personnel who deal with deaf young people were urged to work for better liaison and communication with each other, through workshops, institutes and direct contact.

Training and recruiting of personnel to work with the deaf was also a major area of concern. The group called for federally-financed fellowships for prospective teachers and other professional personnel, including physicians and psychologists. Federal research funds were also requested, and the group specifically urged research into the "learning plateau" that occurs at age 12-15.

A strong recommendation urged a new federal program specifically for the mentally ill and multiply handicapped deaf. The group recommended federal funds set up on a matching basis to encourage states to provide specialized, centralized services; to offer training fellowships for specialized personnel; and to provide preventive mental health services for the families of the multiply handicapped.

Age Group 17-21: First Day

1. Deaf adolescents should be encouraged to have peer social experiences with both deaf and hearing associates in the home, school and community.

Social contact is one of the major factors in developing adequate self-image in all adolescents; this contact may be severely restricted when communication ability is limited by deafness. No single procedure for developing a desirable social atmosphere for deaf adolescents is totally adequate, but creative means of attacking the problem should be explored.

As points of departure, several programs might be more fully examined for key concepts that could be adopted elsewhere. These programs include the "permissive socialization" experiment of the National Technical Institute for the Deaf, the social group activities at Gallaudet College, and the encouragement of social interaction in the Riverside City College. Techniques for developing social experiences might most logically arise from a national exchange of information among existing professional organizations. Deaf adolescents should be encouraged to assume a leadership role in developing these social contacts.

2. More attention should be given to the psycho-social development of deaf children below the age of 17, so that desirable behavior can be shaped early in their school careers.

Many problems found in deaf students from 17 to 21 years old are a result of inappropriate instruction at earlier ages. This recommendation reflects a feeling of the group that many of these problems reflect inadequate development of language skills, combined with a lack of opportunity for effective interpersonal communication.

3. Regional professional teams should be established to bring specialized services, special instruction for personnel and program assistance to any school or agency where deaf children are being served.

Highly specialized personnel -- including such experts as audiovisual workers, social workers, psychiatrists, audiologists and employment counselors -- are needed by schools for the deaf at regular intervals. However, considerations of cost, practicality and continuing need make it unlikely that any one school can employ them. One solution to this problem would be the establishment of traveling professional teams to make regular visits to all institutions and programs within a given region.

By working to upgrade the skills of an entire school staff, such a team could have a lasting impact on the institutions it visits and could effectively create an atmosphere for behavioral modifications among deaf children.

4. Summer institutes should be established on the psycho-social adjustment of deaf adolescents. These institutes should be available to teachers and school staff personnel as well as to parents.

Close working relationships among teachers, house parents and the child's home parents can be important in establishing a consistent and desirable atmosphere for deaf adolescents. Such a relationship requires a common basis for understanding and action among those coming in direct contact with the deaf student.

One way to establish this relationship would be through direct, systematic programming carried out in a summer institute. Funding would have to be provided from state and federal sources.

Such topics as family life education, work habits, and understanding of social responsibilities and behavior would be given special attention. These areas are particularly important to the 17-21 age group, but they are difficult to deal with unless supervising adults have established a cooperative relationship.

5. Training manuals should be provided in guidance and counseling, including manuals for use by deaf adolescents themselves as well as for professional counselors.

Although published material on guidance and counseling is available, it does not cover many critical problems affecting deaf people. Existing material prepared for counselors does not adequately handle the difficulties posed by disrupted communication as a part of deafness, ways of adjusting within various social and economic settings, or the most effective ways of transmitting ideas of deaf people. At the same time, materials used by hearing people are frequently couched in language that is too complex, and concepts that are too sophisticated, for the deaf student.

Special manuals should be prepared by those knowledgeable about deafness in cooperation with experts in guidance and counseling. Funding should be provided through government sources, since the limited distribution of such manuals would probably not interest commercial publishers.

6. National attention and effort must be given to the need for medical-psychological specialists to work with the deaf, including specialists to work in state mental hospitals.

At least three approaches are needed: (1) programs to increase knowledge about deafness in medical and psychological training, (2) expansion of special training to prepare existing specialists for work with the deaf, and (3) emphasis on the training of new specialists in this area.

Programs to train specialists in state mental hospitals should emphasize the need to group deaf patients so that they can be given the needed therapy and other specialized services. In existing programs, roughly 15 to 20 percent of deaf adolescents are dropped from school for broadly defined behavioral disorders (1). These youth need psychiatric and psychological aid that is not now available, since few medical or psychological specialists have training in the specific problems of deafness.

7. A special federal program should be established to meet the needs of emotionally disturbed and multiply handicapped

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(1) Vernon, M. Multiply handicapped deaf children: The significance and causes of the problem. Doctoral Dissertation, Claremont Graduate School and University Center, 1966.

deaf persons. This should be based on federal funding that will make it possible and attractive for states to provide specialized, centralized services; to offer training fellowships for specialized mental health personnel; and to offer preventive mental health services. The program should include a national census of the mentally ill and multiply handicapped deaf.

As was made clear in the keynote speeches, especially those of Hardy and Rainer, the critical mental health needs of the deaf that are not being met today will become even greater in the future. A federal program would provide incentive and leadership in establishing the kind of specialized care that is already given alcoholics, narcotics addicts, sex deviants and the like.

In general, states should agree to centralize their inpatient and outpatient treatment and assign professional specialists to the treatment centers. The funds that states now spend on custodial, non-therapeutic care should be used to match federal grants under the new program, and these federal funds should be offered on a permanent basis, not as short-term grants.

These funding procedures should be used both to provide for deaf hospital patients who are emotionally disturbed and to begin to establish special programs for deaf retardates in state schools for the retarded.

As demonstrated in studies by the New York State project (2, 3), hundreds of deaf youth and adults in state hospitals have received what is essentially custodial care at best. Many of these patients are diagnosed incorrectly; others, with proper care, can be returned to society as productive members.

In addition to inpatient and outpatient centers designed to serve most of the emotionally disturbed deaf within existing state mental hospital programs, new regional residential facilities should be set up for other multiply handicapped deaf who are not retarded or sufficiently disturbed to be hospitalized or otherwise treated under existing programs.

The few existing programs for training mental health specialists in the care of the deaf essentially depend on "soft", short-term fund support. Longitudinal inpatient and outpatient programs, with stable financial support, are needed. Fellowship programs, similar to those now offered to prospective teachers of the deaf, should also be set up to attract psychiatrists, psychologists, social workers and other professionals with career interests in this field.

The program should include such preventive mental health services as home visits, and parent counseling and training, particularly for the families of pre-school deaf children.

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(2) Rainer, J. D., Altshuler, K. Z. and Kallmann, F. J. (eds.). Family and Mental Health Problems in a Deaf Population. New York State Psychiatric Institute, New York, 1963.

(3) Rainer, J. D. and Altshuler, K. Z. Comprehensive Mental Health Services for the Deaf. New York State Psychiatric Institute, New York, 1966.

Many of these recommendations might be financed through Public Laws 89-313, 89-333 and 88-164, if additional appropriations could be made available for these specific purposes. Programs for training specialists to work with the deaf in state hospitals might be included as part of this federal program.

A national census of the mentally ill and retarded deaf should include a count of the handicapped and information on the nature of their handicaps. This might be implemented as part of the federal census.

Age Group 17-21: Second Day

8. Educational programs for deaf children should have essentially the same educational standards as do programs for hearing children. Only when these standards are found to be inappropriate should lower levels of performance be accepted. All deaf children should be given periodic evaluations, and their individual educational programs should be modified as needed.

Parents, educators and medical specialists sometimes limit the instructional goals for children diagnosed as deaf, before the children have had a chance to demonstrate their capacities. The instructional plan for each child should recognize the problems of deafness, but it should be restricted only by the limitations set by the child himself. Periodic evaluations should also be rigorous, since many deaf children fail to progress to the fullest extent of their abilities. In such cases, a change in educational environment, method of communication or instructional technique may be indicated.

9. Representatives of industry and labor should be encouraged to participate in meetings and support programs for the education and rehabilitation of the deaf.

Economic independence is one of the major goals of educational programs for the deaf. If industry and labor were included in the planning of programs, their expertise, background and policies could be brought to bear on the problems; their experience would be especially useful in the development of specific instructional objectives. Of equal importance is the fact that the better acquaintanceship thus gained with the potential of deaf employees could lead to broader vocational opportunities.

10. An intensive study of deaf graduates of hearing colleges should be conducted in order to isolate those factors responsible for or contributing to their success.

For the first time, extensive information has been collected on a large group of people believed to have severe hearing impairment who have completed or are now enrolled in colleges for the hearing (4). This group represents a rich source of information on the problems, attitudes and accomplishments of deaf people who have been able to function in a non-segregated educational environment.

11. The common experience that children reach a plateau of learning at age 12-15 should be intensively studied, with research into reasons and possible solutions.

12. Realistic vocational guidance programs should be made available in all facilities serving deaf adolescents.

Vocational guidance programs will not be effective unless they bring the student face to face with the actual conditions of employment and lead him to vocational aspirations that are realistically based. Programs should include occupational information and industrial tours, and should be conducted by persons knowledgeable in communicating with the deaf and qualified as vocational guidance counselors.

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(4) Quigley, S. P., Jenné, W. and Phillips, S. Deaf students in the colleges and universities. Volta Rev., in press.

13. The three major organizations involved in education of the deaf (the Alexander Graham Bell Association, the American Instructors of the Deaf and the Conference of Executives of American Schools for the Deaf) should be urged to meet jointly to form a single professional organization for educators of the deaf.

No such organization, requiring professional certification for membership, currently exists. If one were organized, it might present a united front and provide a climate for professional cohesiveness.

At the same time, educators of the deaf should take steps to become part of the mainstream of education. This could be done through more direct affiliation with local, state and federal education agencies and with other professional organizations. In this way, educators of the deaf could avail themselves of the increased possibility of help from general education associations in the areas of innovation in curricula, organization and administration.

14. City and state school systems should accept qualified deaf teachers for employment in schools and day classes for the deaf.

While deaf persons are handicapped in teaching subjects directly related to learning speech and lip-reading, there are many subjects that the deaf can teach. Their employment and their specialized understanding of deafness may be more beneficial to their students than any amount of attention by psychiatrists, counselors or other specialized personnel.

Similarly, cities and states should be encouraged to use communication methods suited to the aptitudes, aspirations and abilities of students in classrooms. Many methods of teaching that have received scientific endorsement should not be denied children who can benefit from them. It is the results that count.

15. Greater efforts should be made to train house parents to cope creatively with the educational, social and psychological problems of the deaf child.

House parents spend more time with these children than do any other adults; yet they are, on the average, the least trained of all who come in contact with the children. One means, among others, for implementing this recommendation might be through federally-sponsored workshops designed to bring house parents together for discussion and training with experts in various fields who work with deaf children.

16. Schools and agencies working with the deaf should work more closely with state vocational rehabilitation officials to arrange programs under new legislation.

Recent federal legislation has made possible cooperative agreements between state vocational rehabilitation services and state residential schools or local school districts. Such agreements may provide special services to deaf students, with the federal government paying 75 percent of the cost and a state or local agency providing the remaining 25 percent. The special services to be provided may include vocational evaluation and counseling by trained personnel, on-the-job training, and other vocational services.

17. Regional programs should be established to provide total educational services for deaf children who have been institutionalized for mental illness or retardation. With properly trained teachers, many of these children could be helped to learn.

18. Comprehensive secondary and post-secondary education programs should be provided for the 17-21 age group.

While they often need special help, supervision or facilities, deaf youngsters are entitled to educational opportunities comparable to those given the hearing. Special provision must be made to meet their varied needs, either in state plans or on a regional basis where individual states have deaf populations too small to support such programs.

At the secondary school level, students needing special consideration might be classified as college-bound students, vocational education students, and multiply handicapped students. At the post-secondary level, enhanced opportunities are needed in colleges and universities, junior colleges, technical schools, vocational schools and adult education programs. All of these subgroups contain students who need at least one of three types of assistance: (1) regular school placement with partial special help, (2) special school or class placement within a regular community school system, or (3) special residential school placement. Where comprehensive schools for the deaf at this level are needed, they will probably have to be established on a regional basis.

Age Group 17-21: Third Day

19. Each state should name an advisory group to help coordinate all services for the deaf, and an educational supervisor for the deaf should be appointed in each state board of education.

Greater coordination of programs and services is clearly desirable, and maximum benefits from each state's services will be realized only when state leadership is provided. In addition, local programs need the support of a state leader in establishing and carrying out new services.

20. Captioned Films for the Deaf should make captions available for movies shown on television, and for television programs wherever possible.

Educational, psychological and social benefits would clearly result from providing the deaf with more meaningful ways to use their television sets. The group left open, however, the question of how to persuade the television industry to provide these services for a highly limited portion of its audience.

21. Federal funding should be expanded for preparation of teachers of the deaf, teachers of the multiply handicapped deaf and supervising teachers in educational programs for deaf children.

In some states, a majority of the newly hired teachers of the deaf are not adequately qualified. Recruitment techniques should be improved and fellowship aid expanded, with funds made available for continuing scholarships in programs designed for three and four semesters to encourage higher levels of preparation.

However, there should be a careful check of the extent to which federal funds are actually providing benefits, and means should be devised to increase their usefulness. Careful examination should be made of how many graduates of present programs continue to teach, and how long they remain active in the field. Small, inadequately staffed programs may be ineffective in preparing teachers of the deaf; thus, the Office of Education should begin a national study to determine the number of fellowships that should be awarded to institutions of higher education in order to assure optimum development of programs. Training programs should not be approved unless they include adequate practicum facilities.

22. A concerted effort should be made to reduce discrimination against the deaf, both in law and in hiring practices.

Federal, state and local governments should make sure that their own employment practices do not unnecessarily bar deaf persons, and should demand non-discrimination clauses in awarding contracts to private industry. Motor vehicle bureaus should end discrimination against deaf drivers, and insurance companies should recognize statistics proving that deaf drivers are not higher liability risks than are normally hearing drivers.

The President's Committee on Employment of the Handicapped could help by stressing vocational placement of the deaf, and should encourage appointment of the deaf to its own membership. Similarly, such agencies as the Council of Organizations Serving the Deaf could provide substantial help in this area.

Deaf persons should not be discriminated against in the hiring of teachers in schools for the deaf, in filling faculty positions in graduate programs or in awarding fellowships for teacher training.

23. Salaries for teachers of the deaf should be higher than those paid regular public school teachers, provided they meet requirements for a higher level of preparation.

24. States should consider comprehensive regional programs within their borders for deaf children of elementary school age.

This may involve fiscal support for programs that combine a city, district or county day program with five-day residential programs for children from nearby small towns and rural areas. Any state or local planning for deaf children should include full representation of both day and residential programs (5).

25. Education of the deaf should make use of existing legislation, but changes in present laws may also prove necessary.

Applications under Public Law 89-313, for example, now require yearly renewals for continuing programs, creating delays that jeopardize the effectiveness of the programs. A forward financing procedure, with funding for more than one year, is recommended.

Similarly, to ensure broader use of federal funds in the interest of deaf children, participation in programs under Public Law 89-313 should not affect eligibility for funds under other laws. Administratively, application forms for programs under this law should be simplified from their present, unnecessarily complex state.

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(5) Schunhoff, Hugo F. Comprehensive programming to meet today's needs for all deaf children. Volta Rev., 66: 410, 1964.

Title VI of the Elementary and Secondary Education Act should be interpreted to include residential programs for the deaf, and educators of the deaf should be included on state committees dealing with Title VI programs. At present they are often omitted, and may not even be aware that such committees exist.

26. Federal support is needed for longitudinal innovative research programs in schools for the deaf.

Long-term studies of innovations, and the results of innovations, are badly needed in the areas of teaching, guidance, counseling, mental hygiene and the like. To provide such research at the "grass-roots" level, research funds should not be limited exclusively to university programs; where qualified personnel are available, school programs should be encouraged to apply for funds and helped with their applications. Research consultation from agencies in Washington should be made available to these schools.

27. The U. S. Office of Education should establish a program of extension activities through the state education agencies.

If existing programs are to be improved, better dissemination of information is essential. Such an extension program, perhaps along the lines of extension services now offered by the Department of Agriculture, would provide a more systematic and efficient means of expediting the use of new procedures, techniques and materials for educating the deaf. Demonstration teams should be set up to make sure such material is widely available.

Problems of the 22-plus Age Group

Summary of Discussion

To serve deaf adults who are not within reach of most formal institutional programs, this discussion group focused attention mainly on the need for mental health and adult education programs.

The group recommended that regional mental health programs be set up within existing facilities, and called for federal and local support for programs to recruit and train both professional and sub-professional personnel to work with the adult deaf. Increased involvement of the deaf themselves in planning and leading programs was also stressed.

Expanded programs of adult education for the deaf, the group agreed, should be integrated with classes for the hearing whenever possible. The use of deaf instructors in appropriate classes was urged. Similarly, the group recommended that classes in manual communication be established for both deaf adults and interested hearing persons. Increased research in adult education of the deaf was urged, to explore innovations and to answer such basic questions as how to motivate the deaf.

The group endorsed Congressman Carey's proposal for regional, comprehensive high schools for the deaf, and emphasized that when such schools are established they should be used for adult education programs. Expanded federal aid for adult education programs, to include programs run by non-official sponsors as well as those under local boards of education, was also recommended.

The group suggested that federal incentives be offered to states that are willing to hire rehabilitation counselors specifically for the deaf and state coordinators of programs for the deaf. The U. S. Office of Education was urged to establish an office, under a director, concerned specifically with adult education of the deaf.

Qualified organizations were urged to begin training programs to alleviate the shortage of technical and vocational teachers of the deaf, and the group recommended the training of a greater number of interpreters to enable the adult deaf to take advantage of the increased services to be offered.

3

Age Group 22-plus: First Day

1. Regional mental health programs for the deaf should be established within the framework of existing facilities. These should include programs for service, training and research, and should be set up on the basis of a demographic delineation of need.

Deafness sometimes imposes psychiatric problems different from, or added to, those found among the general population (1). In addition to these psychiatric problems, the communication barrier further restricts the full use of facilities established to serve the mental health needs of the general community. Within these facilities, however, programs aimed specifically at the deaf could be established. Since psychiatric interest in the problems of the deaf is relatively recent, the group stressed the need for training of personnel within these centers.

2. Federal and local support is needed for training of medical and ancillary personnel in the field of mental health of the deaf.

Psychiatrists, psychologists, psychiatric social workers and others who work in a psychiatric setting need a basic orientation to the special problems associated with the mental health of the deaf. Training should include communication techniques used with the deaf, particularly manual communication; special therapeutic techniques; and the etiologic factors and contributing causes that may underlie emotional disorders of the deaf. This training can best be offered in a setting where deaf patients are receiving services, and where trained personnel are available to provide the orientation needed by personnel who expect to work with deaf patients.

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(1) Rainer, J. D., Altshuler, K. Z. and Kallmann, F. J. (eds.). Family and Mental Health Problems in a Deaf Population. New York State Psychiatric Institute, New York, 1963.

The help of those few centers currently providing systematic services for the deaf, as well as those to be developed under the preceding recommendation, should be enlisted. Since such training involves a major expenditure, substantial amounts of federal funding will be required.

3. Recruitment and training of professional and sub-professional personnel to provide psychological and social services and continuing education should be accelerated, with federal and local support.

Personnel remains the key to providing quality services for the deaf, yet a shortage persists despite the scope of present programs to prepare rehabilitation counselors, psychologists, adult education specialists, social workers and other related personnel. Present programs should be expanded, and new programs should be encouraged.

Such workers should possess dual competencies, in the sense that they must be highly qualified in their basic disciplines and should also possess those special skills required for meeting the needs of the deaf. Among these are the ability to communicate manually with fluency, a well-rounded knowledge of the special problems of the deaf, and empathy with them.

4. Federal support is needed for a national network of community centers providing informational, coordinating, counseling and referral services for the deaf. These should be distributed within commuting distance of almost all deaf people.

The deaf are often deprived of meaningful services from their community health, welfare, educational and cultural resources because of communication problems, low levels of literacy and naivete that results from lack of information and experience. The value of special centers to remedy this is being demonstrated under the auspices of the Vocational Rehabilitation Administration in several urban areas, including Pittsburgh and Kansas City.

Such centers should be staffed by experts on deafness, and should make maximum feasible use of existing community resources. In addition to the basic services listed above, priority should be given the following areas:

(1) Stimulation of adult education services for the deaf. These should use and adapt existing programs when possible, and should be directed particularly at poorly habilitated deaf persons.

(2) Stimulation of local interest and support in order to develop better mental health services for the deaf.

(3) Psychological diagnosis and evaluation for case planning and referral. This service could be used for screening before referral to particular community facilities, or could be useful in rehabilitation or planning for any

other agencies working with deaf clients.

5. Broad informational and educational programs on deafness should be devised to reach medical personnel, potential employers of the deaf, parents and relatives of the deaf, community agencies and the general public.

Stereotyped and ill-conceived notions of the deaf may give rise to biases that color employers' attitudes and hamper vocational placement and promotion on the basis of skill. Social acceptance by the community may also be affected. Thus an immediate need exists for programs to disseminate accurate and sympathetic information.

Various means of implementing this recommendation could be employed, ranging from use of mass communications media to personal contact with key leaders of industry and the community. In the case of parents, siblings and others in the immediate orbit of a deaf person, personal contact with educators, counselors and other professional personnel would seem particularly desirable.

6. The deaf themselves should be given leadership training and opportunity at federal, state and local levels, with support for leadership training workshops and advanced study. The deaf should also take part in planning and executing new programs.

Responsible leadership can be fostered within the deaf community if enough activities and opportunities are provided. Training, involvement of deaf persons in community planning, and other measures should be explored. Special attention should be given to the inclusion of deaf persons on all policy and planning groups covered by the Department of Health, Education, and Welfare; the number of deaf members included should be as large as individual meetings permit. Membership criteria for the deaf in such planning groups should be flexible, and less demanding than criteria for hearing persons.

Specific plans should be developed to assist well-qualified deaf students to pursue advanced degrees. Schools for the deaf also should encourage leadership through such activities as student government.

Age Group 22-plus: Second Day

7. Local programs for education of the adult deaf should be established or expanded, both as special classes for the deaf alone and as integrated classes including hearing individuals. Interpreters and note-takers should be provided for the deaf who can work in integrated classes.

Adult education of the deaf should be a flexible program of continuing education at all levels of intellectual ability. It should involve both the learning of new knowledge and skills and the retraining and improvement of existing skills.

In implementing this recommendation, consideration should be given to providing special stipends to deaf adults who take part in extended vocational evaluation and/or training. Such a plan, perhaps modeled on the G. I. Bill of Rights would help the handicapped person meet his family responsibilities while learning new vocational skills. Though several of the group, including some deaf members, objected to this proposal, the majority felt it would not impair the beneficiary's independence or make him feel like a ward of the state.

8. Whenever possible, qualified deaf instructors should be used both in classes for the deaf and in mixed classes.

Adult education programs should be of and by the deaf, as well as for the deaf. Existing programs have achieved best results when the deaf themselves have become integrally involved in the process of education.

9. Federal support for adult education of the deaf should be expanded to include such diverse sponsors as universities, speech and hearing centers, and religious groups, as well as local boards of education.

Comprehensive community involvement is strongly advocated, many adult education programs already involving such sponsors. More should be encouraged to take part.

Courses should be offered to meet the needs of the adult deaf on all levels. Academic content should range from basic education for illiterates through courses for elementary school graduates, to post-secondary courses, self-instruction and counseling. Vocational help should be given in orientation, upgrading of skills and sheltered workshops, particularly for the multiply handicapped. Social areas should include communication skills, leadership training, legal and financial services, counseling for parents of the deaf and manual communication for the interested non-deaf. Recreational courses should be offered in the creative use of leisure time and the plastic arts. Cultural and ethical courses could include current affairs, appreciation of art and literature, and marriage and family counseling.

No single program of adult education for the deaf need include all these specific areas. Indeed, larger communities will probably have several different agencies active in separate aspects of adult education, each funded and administered by the agency involved. If their activities were federally supported and coordinated, interested deaf persons could be referred to appropriate programs through the information and referral agencies that this discussion group previously recommended.

For the implementation of this proposal, it was suggested that federal funds be provided to reimburse institutions sponsoring adult education programs for those costs not covered by state and local governments. Such a plan would provide incentives for institutions that are not now willing to meet the heavy costs of serving the deaf, and it would be similar to plans now in effect for financing special education of the poor.

10. Research is needed to determine the optimum use of adult education programs for the deaf. It should cover such areas as motivational and attitudinal change, the use of new methods and techniques, and programs for the multiply handicapped.

11. The U. S. Office of Education should establish an office, under a director, concerned specifically with adult education of the deaf. The USOE should also have a staff member responsible for coordinating educational services for the deaf in each regional office of the Department of Health, Education, and Welfare.

The scope of the new office should include (1) stimulation of new adult education programs at local levels in cooperation with the Council of Organizations Serving the Deaf; (2) the collection, editing and dissemination of all appropriate information on adult education of the deaf, making sure in particular that it goes to the network of community information services previously recommended by this group; (3) cooperation with all available agencies to ensure comprehensive continued programs for the deaf; and (4) the fostering of research and training programs connected with adult education of the deaf.

The USOE's coordinating staff member, whose position would probably be established as part of the newly formed Bureau for the Education of the Handicapped, could be of great service in providing consultation and in "bird-dogging" proposals through to final implementation. States should be encouraged to seek qualified specialists to perform similar functions at the state level.

Age Group 22-plus: Third Day

12. When regional, comprehensive high schools for the deaf are created, as proposed in Congressman Carey's address, they should be available for the education of deaf adults.

"Comprehensive" is intended to mean the inclusion of specialized medical-psychological services, social services, specialized vocational counseling, and vocational classes as well as academic instruction. This concentration of specialized talent to serve a particular educational group is a trend that should be encouraged. More than economic gains will accrue from consolidating such educational services for a broad range of ages.

The regions that are to be served should be determined according to the deaf population, not on a geographic basis. Surveys of the deaf population are therefore implied.

13. There should be federal support for classes in manual communication, both for the deaf and for interested hearing persons.

Such classes, especially if administered by the deaf themselves, would go far toward achieving this discussion group's desire for increased leadership by the deaf. The classes would also help develop participation by the deaf in the social and cultural life of their communities, bringing deaf people in the role of teachers into contact with their hearing neighbors as students.

This proposal should not be construed as an attempt to supplant any existing programs, or as a proposal to increase interpreting services. The classes would not be for interpreters, but for hearing adults who wish to learn manual communication.

The National Association of the Deaf has already applied for funds for such adult education classes. Under its proposal, the NAD would issue funds to local communities for this purpose, thus simplifying the funding process for local groups that might not wish to go through the extensive procedures involved in dealing with federal agencies. Although some members of the discussion group questioned the possible high cost of such a program, the lack of tuition requirements, and the singling out of one organization of the deaf to administer the program, the group in general endorsed the NAD's proposal.

14. States that have special rehabilitation counselors who are skilled and experienced in working with deaf adults should receive additional funds from the Vocational Rehabilitation Administration to meet the added costs of such a special program.

Deaf clients usually take a good deal of a counselor's time. Since most state rehabilitation counselors are judged by the number of cases they close, they tend to avoid handling deaf clients. This proposal, without infringing on the right of individual states to set their own policies, would offer incentives in the form of monetary awards to states willing to hire qualified counselors to devote themselves to deaf clients. At a recent conference in St. Louis, a limit of 40 clients to a counselor was suggested (2).

Similar federal incentives could be offered to states willing to employ specialists to coordinate and maintain programs for the deaf, as previously suggested by this group.

This proposal should be implemented through increased appropriations to the VRA for this specific purpose. Existing programs for the deaf should not be made to bear the cost of this program.

15. The National Technical Institute for the Deaf and other qualified training programs should assume responsibility for training of vocational-technical teachers of the deaf.

The shortage of teachers of the deaf is well documented; within this shortage, there is an even greater lack of qualified personnel in substantive areas, particularly vocational and technical training. Present teacher training programs, which concentrate on classroom work, are not likely to ease this situation. The NTID, with its orientation toward vocations, will be well staffed to offer such training.

The group also discussed the merits of seeking out teachers who are already qualified in technical and vocational areas and encouraging them to work with the deaf. While the group favored this approach rather than that of teaching new, substantive skills to persons knowledgeable in the area of deafness, no firm conclusion was reached.

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(2) Quigley, S. P. (ed.). The Vocational Rehabilitation of Deaf People. University of Illinois Press, Urbana, Illinois, 1966.

16. Regional, short-term institutes should be set up to train interpreters for the deaf.

The present number of skilled manual interpreters is likely to prove inadequate, particularly if the proposals of this conference for increased services to the deaf are adopted. Provisions for training more interpreters to qualify for accreditation by the Registered Interpreters for the Deaf should be made by the Vocational Rehabilitation Administration and the U. S. Office of Education's Bureau for the Education of the Handicapped.

17. Efforts should be made to aid deaf persons in other lands who now receive almost no services.

The Peace Corps and other similar agencies should be encouraged to increase their educational funds and use them for this purpose. Qualified deaf persons from overseas should be offered special additional funds from government agencies to enable them to study in this country. This program could be financed, in part, through counterpart funds held by underdeveloped nations, with added funds from government agencies and private contributions.

Conference Summary and Impressions

The participants gathered at this Conference have demonstrated that significant elements of American society are sensitive to the needs of the deaf and to the special urgency for improving educational opportunities and results. At the same time it was recognized that growing public interest and support have created an opportunity for careful consideration and effective action that is without precedent.

Among those problems where constructive change is both needed and attainable, the Conference gave major attention to the early detection, assessment and management of deafness; the placement of multiply handicapped deaf children; the diagnostic, predictive and evaluative measurement of academic performance and the ability to communicate; approaches to curriculum development; the provision of secondary education or continuing education beyond the conventional school years for students of differing aptitudes and abilities; and the mental health of deaf persons of all ages. Succinct summaries about these and related topics preface the deliberations of each group elsewhere in this report; they need not be repeated here.

It is also worth noting that the discussion groups, though considering problems of the deaf at different ages, often came up with almost identical resolutions. This was the case, for example, with regard to needs for a national census of the deaf and improved mental health services -- including genetic and other counseling services for both parents and children; the need for special state units for better coordination of programs, liaison and dissemination of information among states or regions; and the needs for improved diagnostic and educational facilities, evaluative tools, and the training of personnel. The consensus among groups often broke down, however, when it came to the means of implementing some of these recommendations; organization by states or by regions, or calls to universities for expansion of their research or service interests were the most common alternatives probed. A similar blurring sometimes occurred even within a given group, where recommendations for certain services would one day embody a plea for brand new, separate programs and facilities, and the next day urge more extensive integration and use of existing services. Clarity for the reader has required that some of these contradictions be edited out and the uncertainties glossed over. To be sure, those items recommended "across the board" will warrant a priority of action, but the internal contradictions suggest a need for further consideration,to ensure programs best designed for their successful implementation (cf. pp. 132, 133).

The objective and accurate reporting of recommendations that are derived by consensus within a conferring group also makes it difficult, if not impossible, to communicate the flavor of lively and vigorous exchange taking place among its members. The present Conference was no exception to this axiom; the iceberg analogy fits the situation well, with the printed, formal report being the one-tenth portion visible, and the give-and-take the submerged part. It is incumbent on all those who participated to share with others the flavor of this distinctive, yet invisible, nine-tenths. To this end it may be helpful to record some general impressions derived from corridor conversations, shameless eavesdropping, and a necessarily limited sampling of the scheduled sessions.

1. Participation by members from important allied fields was active and constructive. They contributed often by the searching questions they formulated, as well as by the answers they gave. A high standard for such contributions was set by the keynote speakers, whose primary professional interests are not in the education of deaf children. The Conference was stimulated by educator Babbidge's moving analysis of the responsibilities of the "outsider", by pediatrician Hardy's impressively documented exposition of the sequelae of certain maternal and infant diseases, by psychiatrist Rainer's cogent insights into the psycho-social attributes and stresses of deaf people and, finally, by Congressman Carey's stirring account of present legislative accomplishments and his thoughtful delineation of tasks that require immediate or future attention. It is unfortunate that a sudden blizzard prevented scientist Zacharias from attending. He was to talk on curriculum development.

2. Deaf adults, including college students and representatives of different generations, participated enthusiastically and effectively in all the discussions. Perhaps of greater significance was the interchange, forceful but reasoned, which centered on ideas presented by deaf adults with divergent, but not always opposed, views on how deaf children should be educated. It would be difficult to find a precedent for this level and quality of discourse

among interested deaf people of varying educational "persuasions".

3. It was still evident among educators of deaf children that their contributions grew out of their own value systems, their experience with post-school accommodations and performance of deaf people, their own education and indoctrination or professional training, their relationships to deaf persons, or some combination of these. Nevertheless, there were no egregious proclamations or professional, territorial imperatives. The educators appeared not to permit biases of one sort or another to impede their earnest and diligent efforts to accomplish the purposes of the Conference.

4. The Conference seemed to accept the idea that change alone is not to be equated with progress. The assumption that education of deaf children so far has been all bad was rejected by most participants. The understandable drive to effect constructive change was tempered by a rational desire to demonstrate, and to conserve and expand what has been judged to be worthwhile. Decisions on how best to make use of the opportunities for change remain tenuous. Whether to extrapolate from existing institutions, practices and modes of organization and administration, or to create completely new establishments and arrangements from the ground up is an open question. The results of the Conference suggest that we shall probably do some of both.

5. The members appeared to be reaching for ways to encourage and achieve broader and more helpful participation of the deaf, and of parents, classroom teachers, motivated laymen and others, in the formulation and execution of proposals to improve the education of deaf children. At the

same time, they were realistically aware that the urge to involve everybody must not get in the way of action. This is a classical challenge for democratic procedures.

6. Although not always immediately evident or explicit, two concerns were as nagging as they were persistent and pervasive. One was the continuing need for qualified personnel with a will to serve deaf people. Indeed, the fate of most recommendations made by the Conference depend on our meeting this need. How to do so in the face of stiff competition from other social problems with equally pressing personnel needs seemed to be the paramount and immediate question of a substantial number of participants. A second concern was the problem of evaluation -- whether it be of curriculum, of a method of communication, teaching or guidance, or of a system of organization and administration. Common sense requires that the effectiveness of any procedure, or change therein, be tested by the most objective investigations we can devise, so that substantive grounds are established for eliminating, amending or modifying our arrangements and practices. In education this is devilishly difficult to accomplish. Many of the outcomes we seek resist satisfactory measurement, and some results must await the passage of years before an attempt at evaluation is even appropriate. Nevertheless, the Conference time and time again pointed to evaluation as a crucial issue demanding more concentrated attention.

7. Finally, it is true that the Conference itself may resist rigorous evaluation. In the language of the statistician, however, it did have high

"face validity" or worth. For this profession to gather together with others under public sponsorship and scrutiny, to propose terms for the achievement of a common objective -- the self-realization of all deaf persons -- was an enterprise that was as essential as it was timely.

S. Richard Silverman
Chairman, Planning Committee

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Discussion Groups

Group I: Problems of the 0-5 Age Group

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Group II: Problems of the 6-16 Age Group

Mangan, K. R. -- Chairman

Pratt, G. T. -- Co-Chairman

Gough, H. N. -- Recorder

Hicks, A. -- Recorder

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Magner, M. E.

Mulholland, A. M.

Pietzsch, S.

Rainer, J. D.

Smullen, H.

White, D.

Woodward, H. M.

Group III: Problems of the 17-21 Age Group

Schunhoff, H. -- Chairman

Simches, R. -- Co-Chairman

Craig, W. N. -- Recorder

Goetzinger, C. P. -- Recorder

Vernon, M. -- Recorder

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Moehlman, L. R.

O'Marra, J. L.

Panara, R. F.

Petrozzi, C. R.

Quigley, H. M.

Roth, S. D.

Turechek, A. G.

Vollenweider, J. A.

Watson, P. E.

Group IV: Problems of the 22 and over Age Group

Kames, R. -- Chairman

Phillips, D. -- Co-Chairman

Rosenstein, J. -- Recorder

Schein, J. -- Recorder

Stuckless, E. R. -- Recorder

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Elstad, L. M.

Farkas, T.

Hedgecock, L. D.

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